Pictorial History
of
REDWOODS

WORKS PROGRESS ADMINISTRATION

CALIFORNIA

CONCLUDING MASTER REPORT

STATE PARKS REDWOODS

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CALIFORNIA DEPARTMENT OF NATURAL
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STATE DIVISION OF PARKS

Division of
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Professional
Projects

District
Number Seven
San Francisco
California

July, 1937

PART ONE

PART I.

PROPOSED PROJECT COVERING
MT. DIABLO STATE PARK

SHOWING ITS SCIENTIFIC AND HISTORICAL ASPECTS
PORTRAYED BY W. P. A. RELIEF PERSONNEL
AND W. P. A. ASSISTANCE TO STATE PARK PROGRAM

WORKS PROGRESS ADMINISTRATION
DISTRICT NUMBER SEVEN

SPONSORED BY
STATE DIVISION OF PARKS
SAN FRANCISCO
MAY 28, 1937.

PART ONE

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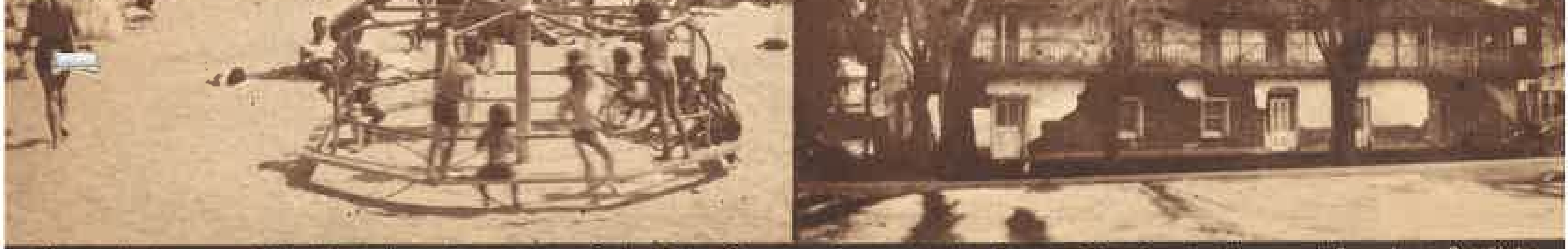
MAP OF STATE PARK SYSTEM

SHOWING

POSSIBLE MUSEUM INTERPRETATIONS

California's STATE PARK SYSTEM

PARKS -- HISTORICAL MONUMENTS -- BEACHES



Pictured above - World's tallest tree; Burney Falls; Palm Canyon; Santa Monica Beach; Old Castro Home at San Juan Bautista

Typical conveniences to be found throughout the State Parks

While the California State Park System was made possible by the approval by the people of the State, in 1928, of a bond issue in the amount of six million dollars, a substantial portion of the lands acquired represents gifts of lands and monies to match State funds as provided in the bond act. Notable among these gifts were a donation of $2,000,000 by John D. Rockefeller, Jr. and $550,000 from Edward S. Harkness for the saving of the redwoods; many donations for memorial redwood groves; gifts from San Diego, Los Angeles, Riverside Contra Costa, Monterey, Humboldt, Del Norte, Mendocino, Sonoma, San Francisco, San Benito, San Luis Obispo, and Santa Barbara Counties, as well as other generous gifts by organizations and individuals.

Patrick's Point, where Forests meet the rugged Coast

Bull Creek Flat, one of the most magnificent Stands of Redwood

Camping among the Redwoods at Richardson Grove

The James D. Phelan Beach at China Cove,

CALIFORNIA STATE PARK SYSTEM

This booklet published and copyrighted by
The California State Chamber of Commerce
San Francisco, Los Angeles, Fresno, Stockton,
Sacramento, Santa Rosa

Looking to the future, the State of California, during the past decade, has developed a comprehensive statewide Park system which now comprises 70 areas of varied interest and beauty, and represents an investment of over $14,000,000. Supplementing the National Parks and Forests, the establishment of the California State Park System has assured the preservation for future generations as well as the present, of representative examples of the scenic beauty and recreational opportunity which make up a great part of the distinctive charm of California. These parks are administered under the Department of Natural Resources, Division of Parks with the State Park Commission as the policy-making body.

RECREATION, HISTORIC AND SCENIC LURES

If you desire to camp, typical parks like Big Basin, Big Sur, Cuyamaca or the Humboldt Redwoods will interest you. If you want ocean bathing, you can visit the beach parks in southern California, and in Santa Cruz County. If you seek scenic beauty, we can direct you to the Redwood Parks and Point Lobos. If early California history lures you, there are **fourteen** historical monuments distributed throughout the State.

And so on.

Redwood Parks, Big Trees, Lake and Lagoon Parks, River and Waterfall Parks, Mountain Parks, Rocky Coast, Sandy Beaches, Tidelands, Desert Parks, as well as Historical Monuments make up the varied list of California's representative attractions in California's system of State Parks.

AREA AND INVESTMENT

The total number is 70. The area almost 300,000 acres.

The total beach, seacoast, bay, river and lake frontage preserved is 96 miles.

Few people realize the value of California's State Park System. Over $14,000,000 has been invested. Approximately half of this investment has been made by the taxpayers; the other half represents private gifts and donations from local communities.

LIMITATION OF USE

To many the reason for such restrictions as are placed on the use of State Parks is not clear, but when understood results in the whole-hearted co-operation of those using them.

The object is the conservation of the values of these parks.

The State Parks of California belong to the people of the State, having been acquired through expenditure of State funds, and of gifts of cash, as well as gifts of land. In accepting such valuable gifts, certain wishes of the donors have had to be respected, with the result that some of the park areas are subject to more restrictions than others. Some of the parks, more appropriately called "reserves" are to be kept in their wilderness state, free from all artificial development and subject only to the simplest recreational use.

On the other hand, where possible, well organized and equipped camp grounds have been provided, with stone fireplaces, tables and benches, running water, sanitary facilities and parking places. These facilities far exceed the present demand in the parks where they are located.

The period of acquisition of the State Parks is, for the present, approaching completion, and the future efforts of the State Park Commission will be devoted to developing those parks which have recreational possibilities and to providing adequate facilities for the use of the public.

Admission to the State Parks is free. But, in keeping with the policy of all national and State owned properties some few charges have been found advisable for the maintenance of the facilities which the public demands for their convenience and pleasure. The taxpayers of the State have made the primary investment in the acquisition of the land and insofar as possible should not be further assessed for maintenance. The general public making use of the parks has realized the fairness of the principle of a moderate charge and is co-operating whole-heartedly.

SPECIAL INFORMATION

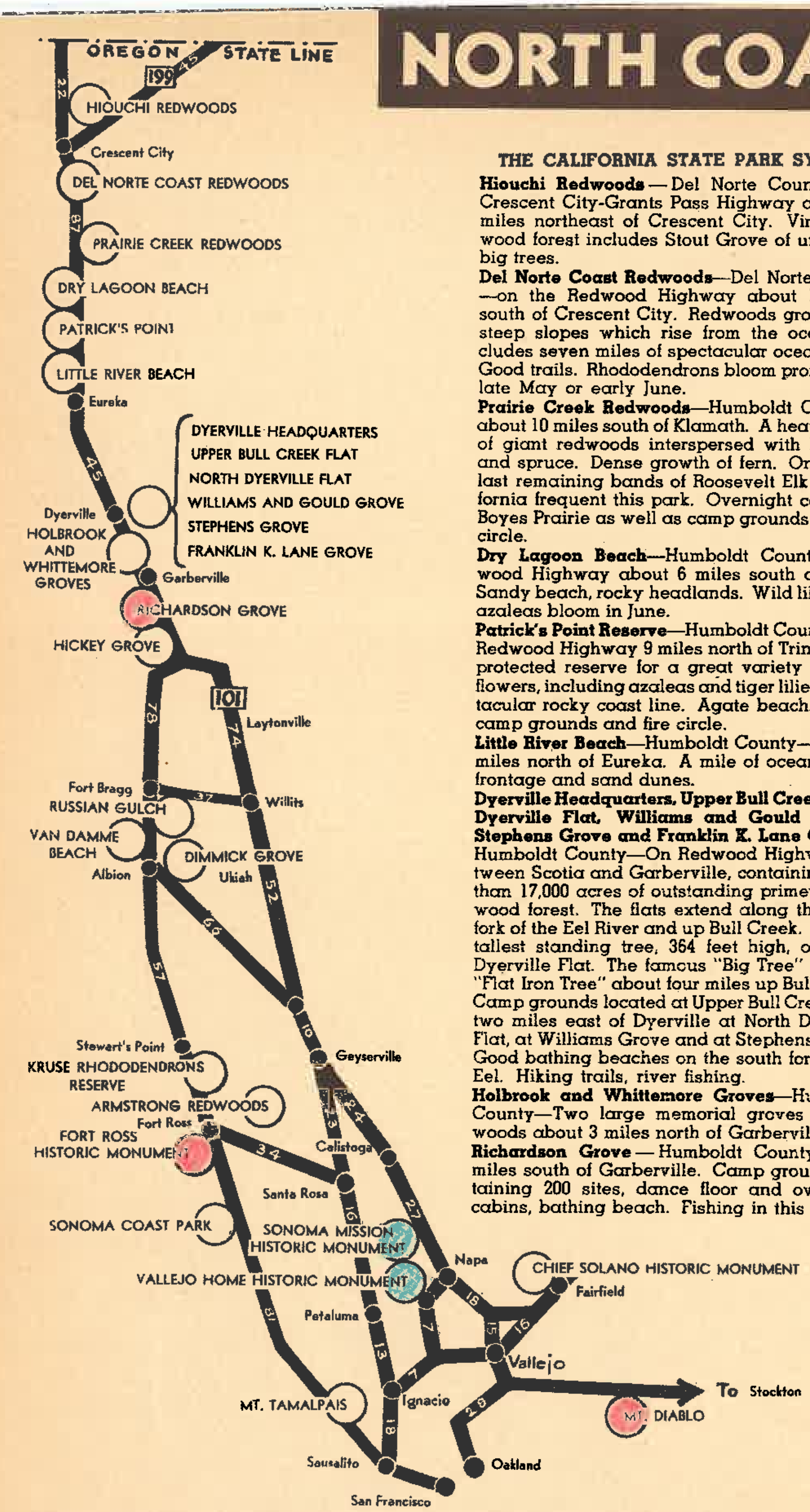
In the following pages we have endeavored to give you as much information on the State Park System as possible. Additional information may be obtained, together with a special travel map, by applying to the Division of Parks, State of California, at 619 Mills Building, San Francisco, or State Building, Sacramento or Los Angeles; the California State Chamber of Commerce; or your local Chamber of Commerce.

Feeding deer in Big Basin Redwoods Park. Close to the Bay Cities, it is one of the most popular recreational areas in the State

Point Lobos Reserve, with its rocky Coast and windswept cypress, framed against the blue waters of Monterey Bay, calls to the lovers of nature

Pfeiffer Redwoods offer a diversity of recreational activities. It is on the Coast Highway which, when completed, will be one of the world's most scenic drives

NORTH COAST COUNTIES



THE CALIFORNIA STATE PARK SYSTEM

Hiouchi Redwoods—Del Norte County—On Crescent City-Grants Pass Highway about six miles northeast of Crescent City. Virgin redwood forest includes Stout Grove of unusually big trees.

Del Norte Coast Redwoods—Del Norte County—on the Redwood Highway about 10 miles south of Crescent City. Redwoods growing on steep slopes which rise from the ocean. Includes seven miles of spectacular ocean shore. Good trails. Rhododendrons bloom profusely in late May or early June.

Prairie Creek Redwoods—Humboldt County—about 10 miles south of Klamath. A heavy stand of giant redwoods interspersed with hemlock and spruce. Dense growth of fern. One of the last remaining bands of Roosevelt Elk in California frequent this park. Overnight cabins at Boyes Prairie as well as camp grounds and fire circle.

Dry Lagoon Beach—Humboldt County—Redwood Highway about 6 miles south of Orick. Sandy beach, rocky headlands. Wild lilacs and azaleas bloom in June.

Patrick's Point Reserve—Humboldt County—On Redwood Highway 9 miles north of Trinidad. A protected reserve for a great variety of wildflowers, including azaleas and tiger lilies. Spectacular rocky coast line. Agate beach. Public camp grounds and fire circle.

Little River Beach—Humboldt County—Twenty miles north of Eureka. A mile of ocean beach frontage and sand dunes.

Dyerville Headquarters, Upper Bull Creek, North Dyerville Flat, Williams and Gould Groves, Stephens Grove and Franklin K. Lane Grove—Humboldt County—On Redwood Highway between Scotia and Garberville, containing more than 17,000 acres of outstanding primeval redwood forest. The flats extend along the south fork of the Eel River and up Bull Creek. World's tallest standing tree, 364 feet high, on north Dyerville Flat. The famous "Big Tree" and the "Flat Iron Tree" about four miles up Bull Creek. Camp grounds located at Upper Bull Creek Flat, two miles east of Dyerville at North Dyerville Flat, at Williams Grove and at Stephens Grove. Good bathing beaches on the south fork of the Eel. Hiking trails, river fishing.

Holbrook and Whittemore Groves—Humboldt County—Two large memorial groves of redwoods about 3 miles north of Garberville.

Richardson Grove—Humboldt County—Ten miles south of Garberville. Camp ground containing 200 sites, dance floor and overnight cabins, bathing beach. Fishing in this vicinity is good. Free nature guide service and trips daily over the park trails. Campfire circle gathering every night during camping sea[illegible]

Hickey Grove—Mendocino County—Re[illegible]ood grove twenty-six miles south of Benbow on the Redwood Highway. Picnicking accommodations.

Russian Gulch—Mendocino County—Two miles north of the old town of Mendocino. 1000 acres of second growth redwood. Surf fishing and sea bathing. Hiking trails. Camp ground. Recreation Hall.

Van Damme Beach—Mendocino County—Two miles south of Mendocino on Coast Highway at the mouth of the Little River. Boating and an excellent bathing beach. Camp grounds.

Dimmick Grove—Mendocino County—Redwood second growth on the Cloverdale-Fort Bragg Highway near Navarro. Good picnicking spots and fine swimming in the river. The camp area is undeveloped except for water and sanitation.

Kruse Rhododendron Reserve—Sonoma County—Eight miles south of Stewarts Point on the Coast Highway. These flowering shrubs grow twenty to thirty feet high and are in bloom in late May and early June.

Armstrong Redwoods—Sonoma County—[illegible]out a mile west of Guerneville. One of the [illegible]est remaining stands of redwood in the county. Picnicking areas.

Fort Ross Historic Monument—Sonoma County—Seven miles north of Jenner on the Coast Highway. Site of an old Russian Fort founded in 1812 by Russian fur traders. The State has restored the stockade, the lookout tower and the old Russian church.

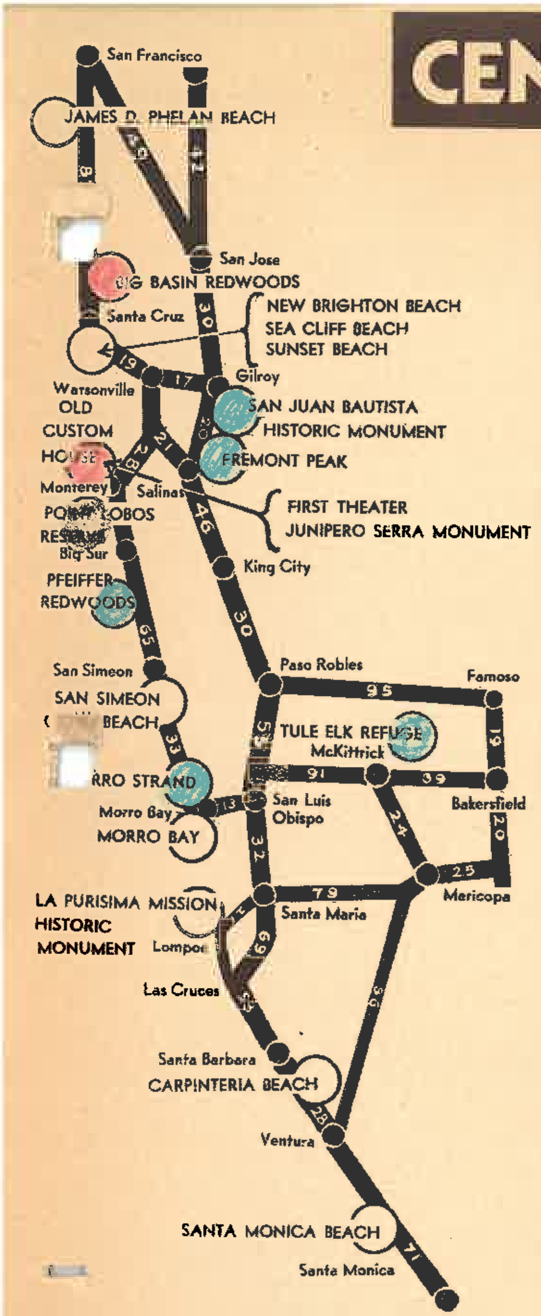
Sonoma Coast Park—Sonoma County—Five miles south to Bodega Bay from the mouth of the Russian River at Jenner. There is a good sandy beach and fine ocean fishing.

Sonoma Mission Historic Monument—Sonoma County—Located in the town of Sonoma. Most northerly of the California missions and contains an interesting collection of early California relics. It was the "Mission San Francisco de Solano."

Vallejo Home Historic Monument—Sonoma County—Home of General Mariano Guadalupe Vallejo, historically notable for his stand advocating annexation of California by the United States. On the property is also a Swiss chalet assembled after it had been brought around Cape Horn in 1850. Museum of early California relics.

Chief Solano Historic Monument—Sonoma County—This is a bronze figure 10 feet high depicting the Chief who was the head of the

CENTRAL COAST COUNTIES



Swanton Natural Bridges Beach, at Santa Cruz.

Indian tribes in this region. About six miles west of Fairfield.

Mt. Tamalpais—Marin County—Five miles west of Mill Valley, 843 acres. Outstanding views of San Francisco and Marin County. Well kept trails. Camp sites. Near by is the Muir Woods Redwoods National Monument. A toll road reaches to the summit.

Mt. Diablo—Contra Costa County—This peak provides a view of a greater area of country than any other in the United States comprising nearly half the area of California. The summit is easily reached by a good motor road, and there are many hiking trails. Camp grounds and picnicking spots.

Sutter Fort Historical Monument—Sacramento County—In the heart of the City of Sacramento. Administered by the State Department of Finance. Early California museum. One of the most interesting of the State's landmarks.

James D. Phelan Beach—San Francisco County—A sandy beach near Seacliff, popularly known as China Cove. It features outdoor fireplaces for the picnickers. Still under development and not yet open to public use.

Castle Crags—Shasta County—4 miles south of Dunsmuir on Highway 99. Includes a mile of frontage on the Sacramento River and noted mineral springs. There are many fine picnicking spots and good fishing in the river and the nearby mountain lakes and streams.

McArthur-Burney Falls — Shasta County — 49 miles northeast of Redding on the Redding-Alturas Highway, branching off 5 miles to the north at Burney. A marvelous area of scenic beauty. The visitor can see where "Lost River" leaves its underground channel and dashes over Burney Falls, nearly 120 feet high. Camp grounds. Fishing and hunting in season in the vicinity of the park.

Bidwell Park—Butte County—Six miles west of Chico on the Sacramento River. Boating and swimming. Picnic tables and stoves. Lunch room.

Marshall Historic Monument—El Dorado County—Near the town of Coloma. The monument depicts James Marshall, who discovered gold in California, pointing to the spot on the American River where he discovered the precious metal in 1848. Picnic grounds. Coloma is reached via Highway No. 50, 8 miles north of Placerville and 17 miles south of Auburn, which is on Highway No. 40.

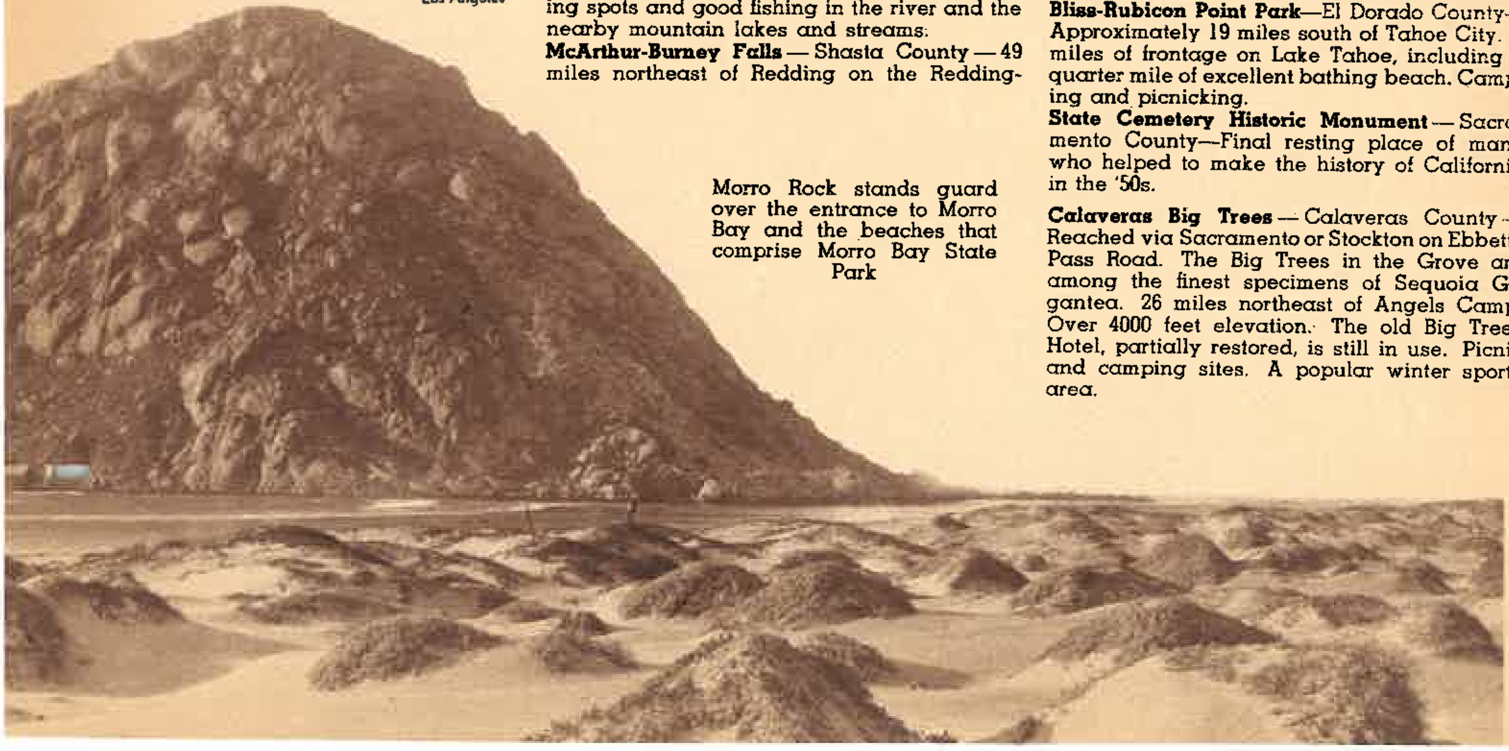
Donner Historic Monument—Nevada County—Six miles west of Truckee. Bronze monument near Donner Lake, commemorating the rescue of the Donner party by Captain Sutter in 1846. Lunch room, picnic tables.

Tahoe Hatchery Camp Ground—Placer County—On the north shore of Lake Tahoe, quarter of a mile northeast of Tahoe City. Camping, bathing and boating. Clubroom.

Bliss-Rubicon Point Park—El Dorado County—Approximately 19 miles south of Tahoe City. 2 miles of frontage on Lake Tahoe, including a quarter mile of excellent bathing beach. Camping and picnicking.

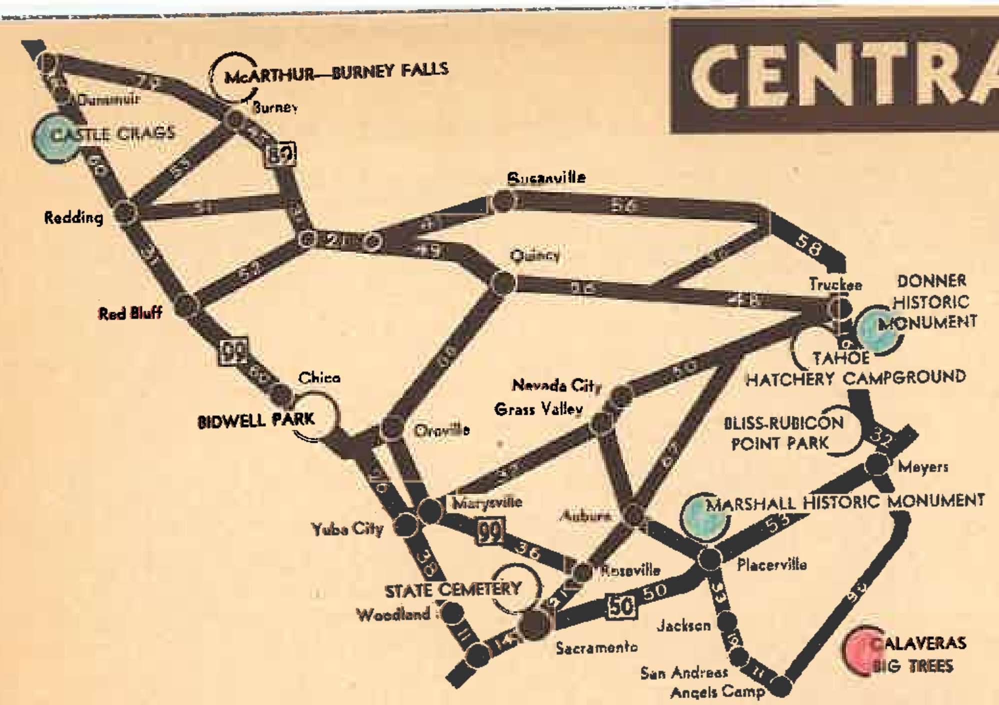
State Cemetery Historic Monument — Sacramento County—Final resting place of many who helped to make the history of California in the '50s.

Calaveras Big Trees — Calaveras County — Reached via Sacramento or Stockton on Ebbetts Pass Road. The Big Trees in the Grove are among the finest specimens of Sequoia Gigantea. 26 miles northeast of Angels Camp. Over 4000 feet elevation. The old Big Trees Hotel, partially restored, is still in use. Picnic and camping sites. A popular winter sports area.



Morro Rock stands guard over the entrance to Morro Bay and the beaches that comprise Morro Bay State Park

CENTRAL VALLEY



The beach at Rubicon Point, Lake Tahoe

Winter affords zestful fun at Calaveras Grove of Big Trees

Towering castle-like peaks gave Castle Crags its name

Big Basin Redwoods—California Redwood Park, Santa Cruz County—24 miles north of Santa Cruz on the Boulder Creek Road to San Fra[illegible]cisco, more than 10,000 acres of which a larg[illegible] area is heavily timbered with virgin redwoods. One of the most famous is the Santa Clara Tree which is 17 feet 9 inches in diameter. Comfortable inn as well as cabins. Extensive camping grounds. Store, lunch room, club room, studio and fire circle. Nature guides conduct trips and give lectures. Swimming, boating, hiking and tennis.

Swanton Natural Bridges Beach—Santa Cruz County—Sandy beach on the north city limits of Santa Cruz. Picnicking and bathing.

New Brighton Beach — Santa Cruz County — Just east of Capitola, 5 miles southeast of Santa Cruz. One of the finest bathing beaches in the State.

Sea Cliff Beach—Santa Cruz County—At Aptos, 8 miles southeast of Santa Cruz. Good bathing beach. Picnic tables, dressing rooms. Cottages, club room, lunch room.

Sunset Beach—Santa Cruz County—On Monterey Bay near the mouth of the Pajaro River, 6 miles west of Watsonville. Bathing and clamming. Camp ground.

San Juan Bautista Historic Monument — S[illegible] Benito County—Twelve miles south of Gilroy in the town of San Juan Bautista. Early California Plaza surrounded by adobe buildings including the Castro House, the Plaza Hotel and Zanetta Hall. Adjoins San Juan Bautista Mission.

Fremont Peak—San Benito County—12 miles south of San Juan Bautista. The site where Fremont first raised the United States Flag in 1846 while awaiting an attack by the native Californians. Fine view of the Salinas Valley from the summit. Picnicking areas.

Old Custom House Historic Monument—Monterey County—In the town of Monterey. The flags of Spain, Mexico and the United States have flown over this old Custom House, built in 1814. It was here that the West was claimed for the United States when Commodore Sloat raised the flag over it in 1846. Museum of many old relics.

First Theater Historic Monument — Monterey County—Constructed in 1844, intended for a sailors' lodging house, but was commandeere[illegible] by ex-soldiers for use as the first California theater. For a time it was used as a resort for whalers, a dance hall and a bar.

Junipero Serra Historic Monument—Monterey County—In the Presidio at the northern limits of the town of Monterey, commemorating the landing of Father Junipero Serra at Monterey Bay.

Point Lobos Reserve—Monterey County—Three miles south of Carmel. One of the most spectacular examples of coastal landscape in California. Rocky coast, gigantic surf, wind-swept cypress framing grassy inland slopes. Little has been done here to change Nature's handiwork. You may park outside and walk through the area by trail or pay a toll charge and drive over the roads. Picnic areas.

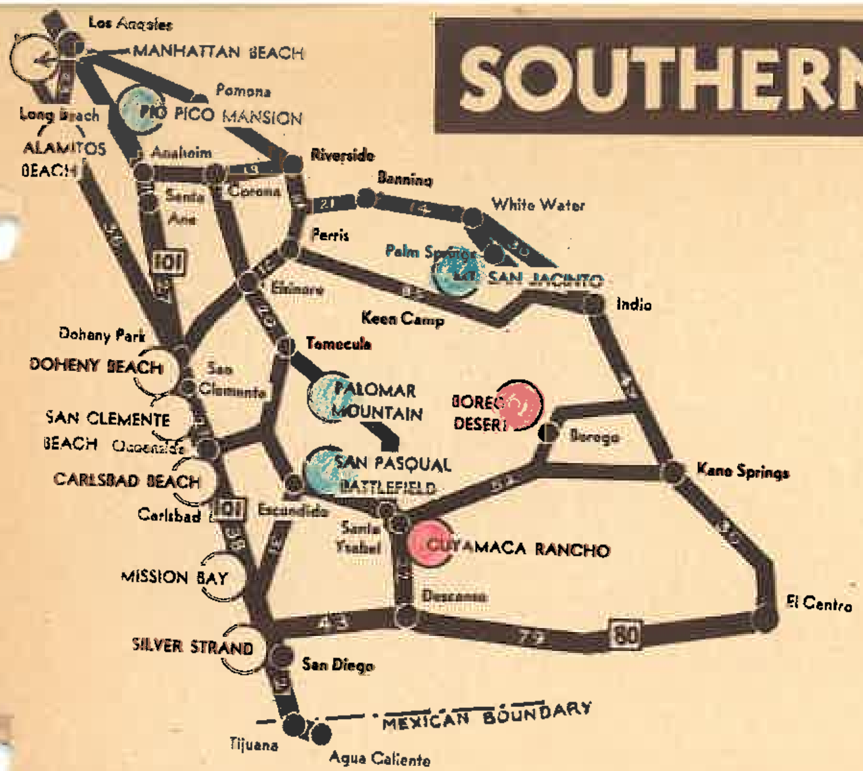
Pfeiffer Redwoods—Monterey County—A recreational area on the Big Sur River, 31 miles south of Carmel on the Coast Highway. Camp sites. Horseback riding, swimming and hiking. The ocean is only a few miles away. Cabins and dining room.

San Simeon Creek Beach—San Luis Obis[illegible] County—45 miles north of San Luis Obispo. 3 miles of sandy beach.

Morro Strand — San Luis Obispo County — 35 miles north of San Luis Obispo. Comprises sandy beach on the highway south of Cambria.

Morro Bay—San Luis Obispo County—12 miles northwest of San Luis Obispo. 3 miles of ocean beach and the same amount of bay frontage south of Morro Rock. Thousands of waterfowl provide an interesting spectacle. Fine 9-hole golf course and club house. Picnic units and camp ground

SOUTHERN CALIFORNIA



Over a million people use this splendid State Park Beach at Santa Monica, each year

This shelter, atop towering Mt. San Jacinto, elevation 10,800 feet, affords a magnificent panorama of mountains, desert and fertile valleys

Tule Elk Refuge—Kern County—15 miles south and west of Bakersfield on the road to Taft. A 930-acre fenced area containing several hundred Tule Elk. Picnicking.

La Purisima Mission Historic Monument—Santa Barbara County—Six miles northeast of Lompoc. Restoration of the ruins of this old Mission is under way.

Carpinteria Beach—Santa Barbara County—Twelve miles south of Santa Barbara. Excellent bathing beach and club house.

Santa Monica Beach—Los Angeles County—At the mouth of Santa Monica Canyon. Provides excellent facilities for bathing. It is estimated that more than 1,000,000 people visited this beach last year.

Manhattan Beach—Los Angeles County—This beach is close to many amusement concessions and is very popular.

Alamitos Beach—Los Angeles County—At the mouth of the San Gabriel River on a peninsula. Provides both inland and ocean bathing. Just south of the City of Long Beach.

Pio Pico Mansion Historic Monument—Los Angeles County—Fifteen miles out of the center of the City of Los Angeles at Whittier you will find the mansion of Pio Pico, last Mexican Governor of California.

Doheny Beach—Orange County—Just south of Dana Point, 3 miles west of San Juan Capistrano. One-half mile of ocean beach. Picnicking and camping.

San Clemente Beach—Orange County—Three miles south of Doheny Beach Park. There is also approximately 100 acres of upland between the highway and the beach. Good bathing. Picnicking and camping.

Mt. San Jacinto—Riverside County—Nineteen miles west of Hemet on the upper reaches of the mountain above Idyilwild. A beautiful view down over the desert from the various mountain peaks. Camp ground. Trails lead to the main peaks.

Carlsbad Beach—San Diego County—About 25 miles north of San Diego. Includes a mile of fine sheltered beach. Picnic sites.

Mission Bay—San Diego County—Just north of the City of San Diego. Comprises a long stretch of ocean beach together with some upland on Mission Bay. Bathing and boating may be had in the Bay. Amusement center in operation during the summer, including a mammoth swimming pool, dance pavilion and other concessions.

Silver Strand—San Diego County—Just south of Coronado. Surf and still water bathing. Picnic facilities.

San Pasqual Battlefield Historic Monument—San Diego County—Forty miles north of San

tive Californians under Pio Pico fought against Kearny and his American forces in 1846, the only important battle in the conquest of California.

Palomar Mountain—San Diego County—15 miles north of Escondido. 1680 acres of southern Sierra forest. Hiking and horseback riding. Facilities for camping and picnicking.

Cuyamaca Rancho—San Diego County—6 miles north of Descanso. One of the most beautiful parks in the State, including 21,000 acres of fine timber. Skiing and ice skating in winter. Camp sites and picnic grounds. Stonewall Lodge is open to the public but reservations must be made in advance.

Borego Desert—San Diego County—10 miles north of the Kane Springs—Julian highway. 196,000 acres in extent. Several canyons where the fanleaf palm may be found. A few live streams that flow from the mountain side keep the canyon terrain covered with

Palm Canyon, Sheep Canyon and Thousand Palm Canyon are a few of the accessible canyons. Horses are available for trips to some of the more inaccessible places. Particularly interesting and beautiful during the winter and spring months when the desert plants such as the Ocotillo or Desert Candle are in bloom.

CHARGES

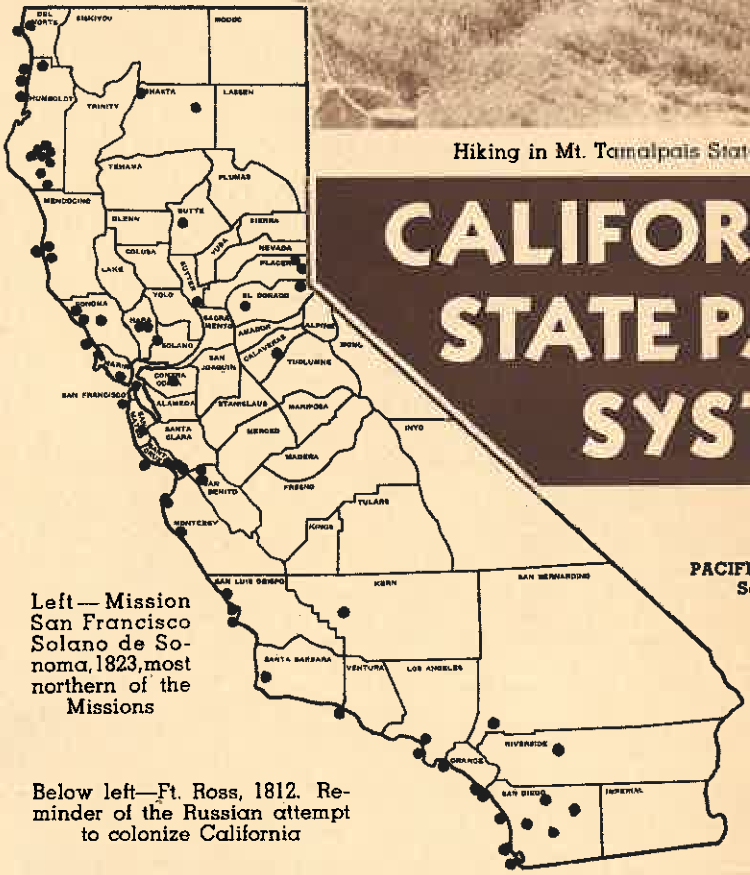
Season service tickets at price of $2.00, entitle the bearer and the occupants of his car to park and picnic or camp two days and nights in each listed State Park area where camping or picnicking is permitted during the year.

Regular rates for camping, 50c a night per car without a season service ticket, and 50c per night after second night to season service ticket holders. Parking and picnicking without season service ticket in developed

Mt. Diablo, towering landmark of Bay Region

Hiking in Mt. Tamalpais State Park

CALIFORNIA STATE PARK SYSTEM



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PACIFIC GRAVURE CO.
San Francisco

Left — Mission San Francisco Solano de Sonoma, 1823, most northern of the Missions

Below left—Ft. Ross, 1812. Reminder of the Russian attempt to colonize California

Borego Desert, particularly interesting in winter and spring

MT. DIABLO MUSEUM TO FOLLOW SUCCESSFUL COMPLETION OF REDWOOD PORTRAYAL PROJECT

Under the State Emergency Relief Administration the Division of Parks sponsored a project to create graphic and pictorial materials to interpret the Redwood. The picturization in its scope included all the important aspects of the tree. It covered the scientific facts associated with the Redwood, the romance, history and economical development of the tree and the manifold uses to which the Pioneers put the Redwood. It also embraced a delineation of significant plants growing within the shadow of the Redwood and the animals that dwell in the Redwood forest, both living and extinct.

OBJECTIVE DF PORTRAYAL

The success of this project is evidenced by the response and appreciation it has elicited whenever exhibited to public view. The portrayal is now nearing final completion and will be set up and exhibited after July 1, in California's most intensely used State Park, the Big Basin Redwoods. Next to Yosemite Valley, the Big Basin, is resorted to by more people per square foot than any other mountain or forested area in the State. Because of the concentration of people within a delineated natural area, the Park offers special problems in its preservation.

The organized system of ideas developed by the portrayal has as its objective the education of the public towards bringing about a more sympathetic understanding of this all important problem of preserving the perishable Park values and beauties.

The unique manner of the presentation of these ideas has won many new champions and enthusiasts for the museum as a means of accomplishing what is most desired. Up to the present time, the Park Administrators approached the problem of preservation by the direct and forceful means of rules and regulations. It is well known that the American public do not react kindly to restraints and prohibitions. The museum approaches the problem in an indirect way. Through enlightment, through the method of winning appreciation and high regard and through impressing that the things to be preserved are among the great living things in nature, the museum makes a very significant contribution to the most fundamental problem the Park Administrators face.

This fact has caused the State Park Commission to see that similiar problems in other parks can approach a more satisfactory solution if the museum is permitted to have a distinctive place in them. There are seventy State Parks and Historical Monuments in the California

System of which more than twenty-five lend themselves ideally to the museum portrayal of the type developed by the Project. There are, thus, years of work ahead for this project. In fact, it would require at least a year for each park and some two dozen years or more to complete the portrayal of the twenty-five parks and monuments of present major significance.

Because of pressing problems in the administration of Mt. Diablo State Park, the Project if granted additional funds, will move on to do a museum for this park.

Mt. Diablo State Park is located within an hour's drive of the metropolitan city of Oakland. With the completion of the San Francisco-Oakland Bay Bridge, the mountain has become a playground accessible as well to San Franciscans, in a drive of an hour and a half. It is anticipated the park will enjoy a tremendous increase in human use.

Mt. Diablo commands a view of all Middle California. On a clear day it is possible to see as far north as Mt. Shasta and the eye can sweep an area as great as that of the State of New York. Very few visitors who drive their automobiles to the summit have a fellowship with nature or possess a background which would enable them to appreciate the view spread out below them. For this reason, interpretative material should be made available at the summit. A building now standing on the summit of the mountain, accordingly, will be used as the Park Museum.

The system of ideas presented by this pictorial museum will include, in addition to the geological and historical portrayal, an exhibit of the park's plants and animals.

The story of Mt. Diablo, geologically speaking, is exceedingly rich. In fact, it is the story of geology for Middle California. It includes both the Coast Range and the Sierra Nevada, as well as, the Great Interior Valley.

From a human standpoint the history of Mt. Diablo is tied in with the romantic and fascinating activities of the early trapper and immigrant parties and the first geological survey parties.

The bulk of the research work needed for this interpretation is to be accomplished by a trained technician. Only, a small amount of preparatory investigation is needed. The main work of the Technician will be that of instructing the artists and in mastering the facts to be presented in such a manner that they can be portrayed by the artists and at the same time sufficiently simple to be assimilated by the public when placed on exhibit. The University of California has already made extensive field studies of the region and the Technician will have access to this material.

In summary, this proposed pictorial museum will enable visitors to the summit, visitors who have no previous knowledge and who have only fifteen or twenty minutes at their disposal, to build up a well-rounded understanding of the main elements that enter into the story of preservation of the natural features of the Park. The visitor will learn foremost of all the problems of the region. Secondly he will be made acquainted with the Park's scientific history, its human history, and its living natural features. The visitor having learned this as background will then be in a position to understand and appreciate the outdoor museum which is the Park itself. In this manner, the exhibit will contribute to the use and enjoyment of the Park as a heritage to be passed on unimpaired.

PICTORIAL INTERPRETATION OF MT. DIABLO: ART WORK

A. PERSONNEL

5 Craftsmen, Sr. Class I
3 " Jr. " II

B. CLASSES OF WORK

A group of artists especially skilled in the portrayal of museum materials ot the type desired have been developed during the years of operation under SERA and WPA. Beginning with fundamentals, the artists have been trained to execute paintings that portray an idea which is a part of the organized system of ideas making up the portrayal. They have become so adjusted to this technique that they are now quite at home in working at so highly a specialized branch of educative art. By maintaining the same staff, it is possible to capitalize on all these several years of patient training and painstaking effort.

DESCRIPTIVE LABELS AND LEGENDS

A. PERSONNEL

1. Technical Advisor

B. CLASSES OF WORK

Suitable and appropriate descriptive labels and legends for the museum portrayal are needed as a means of interpreting the pictures and charts to the public. A skilled technician with the proper background and capable of reducing a mass of scientific data is needed. The work of this technician will also involve the writing up of the descriptive labels giving habits and life histories of animals shown. It will also cover pupular accounts of plants, their special character in terms of their foremost popular appeal and their scientific significance. In the summer time when most visitors see the exhibits, the best plants are not in bloom. These botanical studies with their accompanying description will aim to tell the tourist things which cannot be observed about the plants during the summer tourist season.

OUTLINE OF SUBJECT MATTER TO BE COVERED

PICTORIAL HISTORY OF
MT. DIABLO STATE PARK

The following outline gives the major subjects to be covered in the proposed continued Project. The subject matter will be treated in the same manner and the portrayal will follow the dominant lines and subscribe to the pattern demonstrated by the Redwood Pictorial.

I. HISTORICAL SERIES

- A. Exploration
  1. Trappers
  2. Immigrants

- B. Settlement
  1. Early Spanish
  2. Early American

- C. Geological Survey
  Whitney survey establishing Mt. Diablo Meridan Base since 1851.

- D. Early Exploitation and Ghost Towns
  1. Coal mining
  2. Mercury mining
  3. Cement mill

II. SCIENTIFIC SERIES

- A. Geology and Paleontology

- B. Animal life

- C. Plant life

III. FOLK LORE

Legends of Mt. Diablo

STUDY SCENIC TYPES AND PLANT ASSOCIATIONS

A. PERSONNEL

1. Craftsman, Sr. Class I

B. CLASSES OF WORK

A skilled landscape artist is systematically making studies in oil of the outstanding biologic characters and scenic aspects of the different parks. This artist has completed a remarkable series on the Redwood Parks and is now engaged in a picturization of the Borego Desert. These study types are not mere pictures to hang on a wall, but have many scientific ramifications and uses. They preserve a visual record in color and have qualities which a photograph could not possibly possess. It is believed that the Borego Desert wild flower series now in progress, when completed will be both distinctive and of exceptional merit

PHOTOGRAPHS

A. PERSONNEL

1 Photographer Foreman
2 Photographers, Sr. Class I. N.P.
2 Photographers, Jr. Class II
1 Clerk

B. CLASSES OF WORK

1. Field Operations

Nothing in a systematic way had been done to photographically cover the seventy Parks and Historical Monuments in the State Park System until the present Project was set up. Much has been done, but the job is so big, that only a beginning has been made. The visual record needs to continue to be built by the field operations.

A valuable aspect of the field work not realized by one not familiar with park problems, is that it permits a special assignment for the purpose of acquiring specialized visual evidence. Such photographs acquired for a purpose enable the park administration to better explain the why of certain policies and regulations; why they should be observed and why certain practices should be refrained from on the part of the public resorting to the parks.

It should be obvious from this that this material assembled, not so much for the purpose of advertising the parks and bringing people to them, but as to teach certain fundamental facts which must be learned and appreciated if California's most outstanding wonders are to be preserved.

2. Laboratory Operations

So important are these visual material being acquired in the successful accomplishment of park objectives that the Division of Parks, despite a curtailed budget, has purchased and made available a very adequate and, indeed, complete, photographic laboratory, equiped not alone for printing and developing, but with suitable devices for copying photographs and making desired enlargements.

3. Classification and Indexing of Negatives

All newly acquired negatives will continue to be classified in accordance with their direct or indirect relationship to one of the seventy State Parks. Concise descriptive titles will be written for each negative. Negatives will be put in 5x7 glassine envelopes, labeled and filed.

Three prints as in the past, will be made of all negatives. These will be mounted on durable and suitable grade of grey, legal sized cardboard. The entire file will be designated as the Index.

4. Classification, Indexing and Copying Prints

Prints for which no negatives exist and which are of exceptional value will continue to be copied and included in the Index. Scientific illustrations, historical pictures andother drawings from reliable sources are greatly sought after and constitute an important contribution serving a multitude of uses and needs.

5. Display Panels for Highway Entrances

An introductory series of seventy-two panels depicting the State Parks of California are now in progress. These are to be placed at all the highway entrances.

They will be the means of informing visitors entering the State the nature and character of California's Parks. They will encourage visitors to travel more extensively over the State and will cause a wider spreading of tourist dollars.

LANTERN SLIDES

A. PERSONNEL

2 Artists, Jr. Class II
2 Clerks, Class III

B. CLASSES OF WORK

Colored lantern slides are of tremendous value in illustrating lectures given before the general public throughout the State. They are especially important for talks given in the parks accompanying evening lectures before campfire gatherings. People go to the parks for a change and for a rest from the things that they commonly enjoy in cities. In this spirit of wanting something different they attend lantern slide lectures. The slides are thus an effective means of bringing certain park messages to the people and are of outstanding educational value.

Only the surface has been scratched thus far in this department of the Project's work. A lantern slide set on the entire State Park System has been completed, but there lies ahead a considerable number of sets for special park subjects and special park problems.

MAPS

A. PERSONNEL

2 Craftsmen, Sr. Class I
5 Draftsmen, Jr. Class II

B. CLASSES OF WORK

1. Basic Maps

The draftsmen have acquired a very valuable understanding of the parks from a map standpoint. This map work started at the Park Office needs to be continued under the renewed Project. Acquisitions of the new park areas make necessary continual additions and changes in park boundaries and hence, additional and continual map work. Thus, through basic source material has been brought to completion, it must be kept up to date and requires a continual interpretation in the light of recent developments and changes.

2. Pocket Guide Series

A Pocket guide series of maps for use in the field and for permitting ready and quick identification of boundaries and objects in the field is still in progress. When completed this series will prove of lasting benefit because fundamentally, at present, this series is only about fifty percent complete. Once the master copy is worked out, duplicates have been an excellent means of keeping the less skilled draftsmen at work at a performance which is suitable to their skill and previous training.

CABINET AND CARPENTRY

A. PERSONNEL
- 1 Craftsman, Sr. Class I N.P.
- 3 Carpenters, Sr. Class II
- 1 Carpenter, Class III
- 2 Handymen, Class III

B. CLASSES OF WORK

MUSEUM DISPLAY CASES

Museum cases to contain the pictorial museum exhibit for Mt. Diablo State Park are to be made on the Project and will be of the same high-class character in workmanship as those completed for the Redwood exhibit.

CRATES FOR MUSEUM MATERIALS

The problem of transportation of museum materials to the park always involves suitable crating. Carpenters not having the skill of the master craftsmen who make~~s~~ the museum cases and picture frames, are thus given effective employment in making these crates.

BULLETIN BOARDS

The more developed parks need bulletin boards protected by glass. These are to be used to display certain maps and information which will permit the public to better enjoy the area and to be able to take the trails after having first made themselves familiar with the layout of the topography and its essential features.

PICTURE FRAMES

Excellent frames are being made for many uses. All museum display materials not exhibited in the cases must be separately framed. Numerous paintings in oils are being made to be hung in the various administrative halls and community buildings where the public resorts in the Parks. These need frames. The photographic enlargements similarly displayed also require framing.

SIGNS

A. PERSONNEL

2 Sign Painters, Sr. Class II
3 " " Jr. " III

B. CLASSES OF WORK

The Government Emergency Program throughout the State, involving C.C.C. and other Projects has resulted in the development of a considerable number of different signs, varying both in specific nature and character. Through experimentation and trial and error methods, it has been discovered that the elaborately carved signs, while they have given employment to persons skilled in the carving craft, are looked upon as the most prized of smuveniers and are stolen very soon after being put in place. For this reason, signs that will serve the purpose but not entise removal or destruction have been developed. In fact the ideal signs meeting all requirements have been produced.

Only five of the seventy parks are equipped with these new standard signs. The balance of the sixty-five parks in all, need to be signed as rapidly as conditions will permit in the progress of the Project.

Now that the standard sign has been perfected, and experimenting has ended definitely, pressure will be exercised in this department to effect mass production. But there are years of work ahead even with an increased personnel and a mass turn out of signs.

STENOGRAPHIC AND ADMINISTRATIVE

A. PERSONNEL

1 Supervisor
1 Craftsman, Sr. Class I
5 Stenographers, Sr. Class II
5 Clerks, Sr. Class II
3 Typists, Class III
2 Clerks, Class III

B. CLASSES OF WORK

Necessary office routine needs to be carried on at the Project and involves stenography, typing and filing. The work of keeping a record of each job performance and of keeping track of books, specimens, photographs and preserving continual vigilance over museum material both completed and in progress is very considerable.

The work of classifying and labeling all photographic negatives in current use in proper file and order is all a part of routine which requires continual attention.

Typing Special Reports

The Division of Parks has acquired reports on special park matters some of which are of great value and have a permanent place in the park archives. Transcripts made of these special reports are a means of giving them a more current usage and also a means of making possible preservation of the original report through lessened handling.

Classification	$65.00	$85.00	$94.00 and $93.60	N.B.
Intermediate				
Handymen	2 #111			
Clerks	5 "			
Typists	3 "			
Carpenters	1 "			
Sigh Painters, Jr.	3 "			
Skilled				
Artists, Jr.		2 #11		
Craftsmen, Jr.		3 "		
Draughtsmen, Jr.		5 "		
Photographers, Jr.		2 "		
Stenographers, Sr.		5 "		
Clerks, Senior		6 "		
Carpenters, Sr.		3 "		
Sign Painters, Sr.		2 "		
Professional and Technical				
Artists, Sr.			5 #1	
Draughtsmen, Sr.			2 "	
Craftsmen, Sr.			5 "	
Photographers, Sr.			3 "	
Technical Advisor				1
Supervisor				1
Total	14	27	15	2

Total Personnel 58

PART TWO

PART TWO

PICTORIAL HISTORY OF REDWOODS

SHOWING THEIR SCIENTIFIC, ECONOMIC AND HISTORICAL ASPECTS
PORTRAYED BY RELIEF ARTISTS

DIRECTED BY JOHN D. ELLSWORTH, SUPERVISOR

RODNEY S. ELLSWORTH, TECHNICAL ADVISOR

WORKS PROGRESS ADMINISTRATION

DISTRICT NUMBER SEVEN

PROJECT 2873

SPONSORED BY

STATE DIVISION OF PARKS

SAN FRANCISCO

JULY, 1937

PART TWO

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JUSTIFICATION AND PURPOSES

Broadly stated, the objective of the Pictorial History is to provide educational materials which will be a contribution to a better understanding of the major values, and to teach the park user how best to enjoy the Redwood Parks without impairing the living wonders which these parks seek to perpetuate.

The conviction of a real need for such exhibits materials as has been created, arises out of ten seasons of experience on the part of the Technical Advisor of the Project who has conducted the educational program in one of the most intensely used Redwood Parks.

For the past ten seasons two means have been used to enlighten the park user, and to make him acquainted with the significance of his surroundings. These two means are:-

1. The Guided Trail Trip. By taking groups of visitors out on the park trails, a trained and experienced naturalist can stimulate interest in introducing natural phenomena close at hand, and by enabling the visitor to gain an insight into the great book of nature based on first-hand knowledge from sense of perceptions.

2. The Evening Campfire Lecture. Here facts are presented which are not directly the product of the present living evidence in the park. Here, information gathered from distant sources, or subjects that do not lend themselves

to treatment in the field, can be given before a large assemblage of park users. Here, colored lantern slides can be made the means of impressing the audience with the diversity, the beauty and the wonder of the State Park System. Here, slides can be shown of scenes of the Basin before the advent of the crowds of campers. The beauty of the original flora can then serve as a forceful argument in favor of preserving the park in its pristine condition. The high lights of the movement to save the Big Basin for a public park can be illustrate the park ideal, and glorify those who were park-minded, and those who serve as public benefactors.

However, each of these two means of contacting the park user, has proved by experience to have certain very definite shortcomings. They do not, in and of themselves, permit a well-rounded educational program. Their chief defect is, that they reach only a limited number of park users. When it comes to contacting the large number of short-time visitors, those who stay has narrowed to a "glance about", these means have decided limitations.

Observation and experience extending through ten consecutive seasons has shown that these transients constitute the most predatory element that enters the park. They come with the mantle of civilization so tightly wrapped about them, that unintentionally, and in most cases, without malice, they carry into the forest all the possible blighting influences of civilization.

To most of them a tree is something good for lumber. Their pioneer heritage urges that the best use it can be put to is when it is cut down. But, as a standing tree, it has values and uses which they neither comprehend nor appreciate. That is is alive, and capable of being injured, is of no consequence.

They look upon the most spectacular trees, not as exhibiting unexampled life and power, but as distinctive freaks. They wish to ticket their name to an adventitious immorality, by cutting their initials in the bark of the largest tree. They are ambitious to carry on as the pilgrims of old, and take back mementoes of their visit - shrubbery, flowers, young trees and ferns.

There is yet another class to be considered, who are equally harmful. Their trip to the park represents a jeweled opportunity to be free from the restrictions of conventional life. They wish to kick over the traces and break away to freedom. In this spirit, it is natural that they should regard prohibitions as a harsh bridle, when their supreme desire is to have free reign. Signs proclaoming ""Dont's", and imposing warning and penalties are at cross purposes, and are resented. Rules and regulations only serve to check and to hinder, and incur their antogonism. Sometimes they actually express this by destroying the sign, or by defacing the posted regulation.

Experience has proved that the conduct of these "free spirits" can be guided by suggestion and direction. Their attitude can be changed, providing they are approached in the proper manner. The educational program strives to accomplish just this. It attempts to build up the right viewpoint, and an appreciative state of mind.

Those who remain in the park long enough to come under the influence of the educational program, do change their attitude. They gain a different concept respecting the ways in which a vacation can be both pleasurable and profitable. They discover that it is not necessary to give unbridled reign to their conduct. The park offers the anthesis of city life, and the opportunity to depart from accustomed activities. Its proper enjoyment affords relief from the pressure of routine and struggle. Thus, through enlightenment, and participation in the trail guide activities, they come to realize that the rules and regulations are not so intolerable as they first thought.

The problem is clearlyone of reaching the class of park users denominated as "predatory transients", and"free spirits ". The educational devices of the guided trail trip, and the evening lecture, accomplish their objective work, providing there is a certain duration of exposure to the propaganda which they disseminate. The picknicker, the holiday sight-seems, and even the aimless motorist who is "just driving through", visit the park at times when it is awkward, or impossible to reach them through the medium of the guided trail trip. Unsuccessful attempts have been made to schedule special trail trips on Sunday afternoons, for instance, in order/to contact these individuals. Other efforts have been put forth, but to no avail.

As a consequence, the picturization of the Pictorial History has been developed as a self-operating device, which would attract those whose stay in the Park is short. The materials on exhibit basically interpret information, and impress facts in such a way that they are readily grasped and understood. The story element is kept uppermost, so that it will take a grip on the interest, and carry the beholder along pleasurably. The picturization, by having the advantage of good arrangement, as well as being well portrayed, seeks to impress the need of keeping the park in a natural state.

To repeat what has already been said. teaches the park user to enjoy the park, without impairing the chief attractions and wonders. By winning, rather than discipling, it serves as a means of gaining a sympathetic attitude, which normally and gradually, evolves into an attitude of mind in support of park rules and regulations.

In the second place, the Pictorial History was conceived as an educational device which would round out the other two methods,- the trail trip, and the campfire lecture. In other words, the secondary aim of the picturization is to round out the effectiveness of the trail trip, and the campfire lecture. The exhibits contribute, finish and emphasis and conclusiveness to certain facts difficult or incapable of being brought out on the trail trip or at the evening campfire.

In summary, on one hand, the Pictorial Historical serves as the interpretive medium to introduce the Park, as an avenue to reach the public mind with a definite message. It puts the understanding in tune, and makes the park visitor, whose stay is short, more readily receptive to the objectives of the park, and more willing to obey rules and regulations. On the other hand, it contributes what the other two methods lack, and hammers home their teachings.

INSTALLATION

On July 3, 1937, the Pictorial History of Redwoods was formally opened ot the public. The Pictorial is housed in the most historic building now standing in the Administrative Center in the Big Basin Redwood Park.

This building was erected at a time when no roads entered the area and before the creation of the Park. It is built of Redwood unbarked logs of uniform size felled in the vicinity of the site of the building. All the sawn lumber was packed in by mules over a trail which threaded the forest.

The building is architectually suited for the portrayal and is sufficiently large with the use of the ample porch which runs around three sides of the structure.

TECHNICAL SUPERVISION AND MANAGEMENT

The Technical Advisor and Art Director of the Project, Rodney S. Ellsworth, has devoted the past twelve years to an exhaustive study of the Redwoods. He has dusted off many an old volume and examined into a great array of periodicals and newspapers in an endeavor to master the literature on the tree. Besides printed material, he has gone to great pains to record the reminiscences of pioneers and has saved for posterity many facts which are fast disappearing and were known only to the very few pioneers that still survive.

Because of twelve successive years' experience in educational work in the Big Basin, Mr. Ellsworth, has learned what facts have foremost popular appeal and how to present material so that it will prove interesting and instructive.

The entire concept of this Pictorial History and its evolution step by step until it bodied forth in finished form has been the work of Mr. Ellsworth. The suitable and appropriate descriptive labels and the legends interpreting the pictures and charts to the public have also been his labor.

The Supervisor of the Project, J. D. Ellsworth, Father of the Technical Advisor, has successfully accomplished the very difficult task of administration and supervision. His job has been the manipulation and adjustment of personnel and the discovery of the niche wherein the worker could produce something creditable. He was not interested in keeping the workers active, soothed and refreshed. Vitally interested in the performance of the workers so that their productions would possess both quality and merit, he was unceasing in the very considerable labor involved in training the workers to their special task.

It must not be suspected from this that the welfare of the worker was neglected. Sympathetic understanding of their relative problems has at all times entered into the work of supervision. The results shown in this report are ample testimony that the workers were induced to become seriously interested; that they put their best efforts forth; that they fixed their eyes upon the worth-while purpose and mission of the Project. In the joy of executing a fine piece of work, the workers found greater peace of mind and a real measure of freedom from the vexatious cares tugging at their coat tails. Their morale has been decidedly pegged up. One and all, they now feel that they have gained experience and training which better fits them to carry on.

Some have actually changed habits and ways. They have learned the value of a planned and chartered course and the importance of rudderless drifting. Content, and having long, smooth, regular stretches in which they can work up speed and feel the quality of accomplishment, they have benefitted very greatly from regular hours and some measure of regimentation. Realizing the benefits of the Project, they now have a genuine affection for its welfare and do everything in a positive way to build up its creditable productions.

In fact, the Project is outstanding for the amount of usable and valuable materials turned out. It has won a place and its sponsors fully acknowledge the necessity of its continuance. The loss of its assistance would, indeed, be a real one.

View of one corner of the portrayal showing how young and old are fascinated by the exhibits. Through the medium of attractive paintings, each being an integral part of the related system of ideas portrayed, educational propganda is being impressed on the public. By such means the park users are being taught how to enjoy the park without impairing its living wonders.

Actual registration shows that thousands have already viewed the portrayal and gotten its message. On July 4 and 5 the building was crowded to capacity with people from all over California. A surprising number were out-of-State residents.

The display cases have been constructed with great care so that their contents may be easily examined. Made of well selected Redwood heartwood, they have been given a special wax finish. This preserves the rich, satiny pinkish natural wood color of the freshly exposed wood. The natural color of the Redwood harmonizes beautifully with the barked logs. The panel upon which the painings are mounted is of a pleasing bluish-grey.

Each case is sufficiently varied to compliment the adjacent cades, yet harmonizes in delineation of line and color with those cases related to it.

The side porches are being utilized for the zoological and botanical portrayal.

Here is shown the plant exhibit. On the left side of the picture is the living plant and flower display. Of log construction with a compartment suitable to hold water and earth, the plants are effectively exhibited and at the same time made to live. By sticking them into holes bored through the logs into the water or earth below they are prevented from withering and remain fresh and green.

Neat cellophaned labels give both the popular and scientific name of the plant.

The adjacent paintings in the cases show the flowers, berries or seeds of the plants. By examining the paintings and the living specimens the park visitor may learn what the plant exhibits in the spring or fall. In other words, the visitor acquire a knowledge about the plant impossible to gain during the summer months.

INTRODUCTION

The works Progress Administration, District seven, State Parks Redwood Project, work Number 2873, has successfully pioneered a new field. It has created and brought to a well-rounded completion the first Pictorial History in Redwoods in existence and made a significant contribution to the educational aspects of the California State Park preservation program.

The true nature of this contribution can best be sensed through knowing the peculiar situation in which the State Division of Parks found itself shortly before Federal Emergency Appropriations were available. A $12,000,000 fund enabled the State to acquire some of the most highly prized and outstanding scenic and historic areas during the downward plunge of real estate values in the depression. In three years the parks increased 300 % in number and the California State Park system attained the proud position of having 70 parks Historic Monuments within its jurisdiction. Unfortunately, this sudden and great enlargement of State Parks and Historic Monuments brought with it serious and perplexing administrative problems. The State Legislature, instead of increasing the Park appropriation, did the opposite. It curtailed the Park budget. As a consequence, no major Park development program would have been possible without Federal Aid.

While park lovers and scientists the country over rejoiced that Bull Creek and Dyerville Flats had been saved and the State had acquired the densest timber growing on the globe, and the world's tallest living tree, the Park administrators were faced bluntly with the problem of not being able out of a diminished budget to adequately protect and care for these properties. To save the situation, they kept these priceless areas undeveloped and permitted no extensive human use.

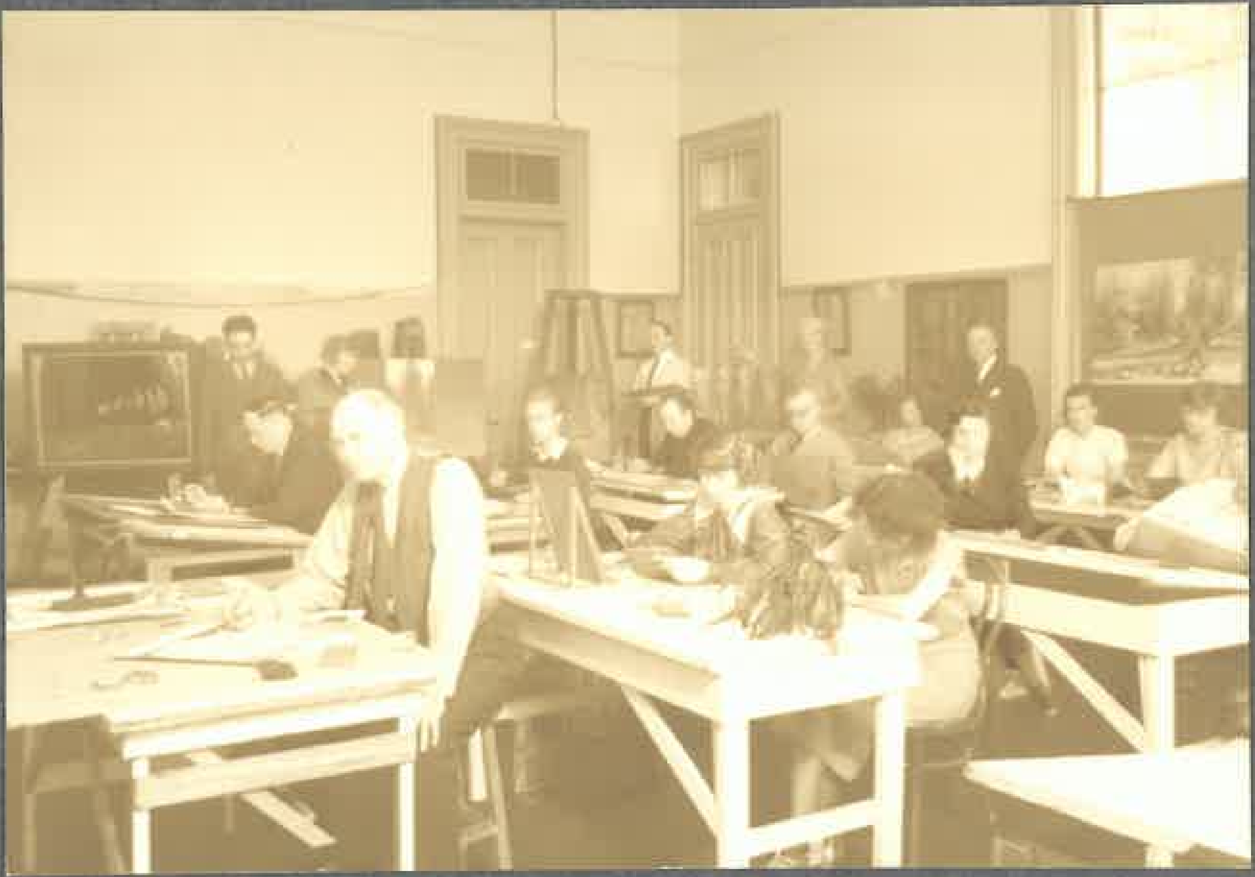
However, in the Big Basin Redwood Park human use of the area had already gained such impetus that it was out of the question to exclude the public with an inadequate administrative staff available.

There was thus, a very real and crying need for an educational device that would awaken the Park user to a sense of the menace of unregulated use of the Park.

Americans, in particular, resent prohibitions and demands. They are antagonistic to rules and regulations. They can be guided, nevertheless, by direction and suggestion. In such a role, education assumes a place of very vital importance in the park protection program. The Pictorial History is just this sort of educational device that fosters, through the right approach, a respect for the Redwoods and their living components. It builds up an appreciative state of mind and teaches the park user how to enjoy the park without seriously impairing the living wonders which the Park seeks to perpetuate.

Obviously, without funds the Division of Parks could not create the Pictorial History just installed in the Big Basin Redwoods. Fully appraised of the value of this Pictorial, yet still without a sufficient budget to resume this work, the Division welcomes warmly the opportunity to continue the work on a Pictorial for another Park, as a project supported by Federal funds. Now that this Redwood project has completed its task, request is made to continue and complete another Pictorial for the Mt. Diablo State Park. It is hoped that the pages which follow will give abundant proof of the worth of the undertaking and will justify approval of the new project.

Continuance may be urged in another ground. Several years of patient and consistent training have been invested in the present staff. The artists have mastered a new and different technique, and know how just how to give the desired educational emphasis to their paintings. They have actually become specialists in this type of portrayal and the investment now made in their initial training can be made to continue to yield still greater divididends in the form of yet more outstanding portrayals.



PERSONNEL

A staff of some twenty hand-picked artists and technicians have successfully brought to completion the first portrayal of the historic, scientific and economic aspects of the Redwood and its associated plants and animals. Before these graphic educational materials could be executed it was first necessary to train the artists and to have them master the specialized technique required. The main problem involved was that of getting the artists to give the proper emphasis to their paintings so that the educational function would predominate. A discussion of this major problem follows.

A second major problem was that of fitting each artist's background and talents into the work of the portrayal. The next photograph shows three artists at work on the Pioneer Cabin building scenes. The artist in the upper right hand corner was good at drafting and laying in the foundation work of the drawing. The artist in the lower right could color, but was not a sufficient master of water colors to bring his work to a creditable and acceptable point. Hence, the artist in the upper left was induced to strengthen the paintings of the second artist. In this way and by this type of cooperative effort, results were secured. This, of course, required submersing the identities of the three artists getting the artists to forget self in the interest of doing a superior piece of work by clubbing together.

THE EDUCATIONAL vs. THE ARTISTIC FUNCTION OF ART

A very real factor must be taken into consideration before any just appraisal of the efficiency of the project can be made. That bewilderment and floundering which marked the beginnings of the project was in part due to the almost perfect ignorance of the artists. Many could not even identify a Redwood. Its biological, historical and economic aspects were far beyond their depth. In fact, the whole work of the project presented a new field. Range after range, like a mountain system stood before them. Obviously, it was necessary to attain the foothills before the slopes further up could be reached. Then there were a maze of ascents before the summit could be scaled. We thus had no alternative but to begin with elementary teaching and to instruct our artist at every stage of progress.

Because it was necessary to train each artist in every special phase of the work, an immense amount of preparatory labor was lavished on each unit of work. Constant and continuous supervision that watched and guided almost every stroke of pen and brush was essential. The highly specialized nature of the subject matter left no other course open. And all this patience and care in laying a foundation was time consuming in the extreme.

It is essential to recognize that even the most accomplished artists had never tried their hand at interpretive art which is basically educational. In every case, where they had expressed thought by means of pictures, they had been the most concerned over those aspects of the picture which were decorative, ornamental or beautiful. Art for Art's sake was the governing principle. Whatever educative feature their portrayals possessed was quite unconsciously created and slipped in without bidding or purposeful design.

Now, we were engaged in the creation of works of instruction, not works of art. In impressing our artists with this fact we encountered no end of difficulties. First of all, we were accused of striving to undermine all that is taught as basic in the art schools. Our artists were schooled in the belief that, if precise and definite information was the primary element to be conveyed in a picture, it would be necessary to sacrifice that peculiar excellence which is the earmark of art. They maintained that such a picture which satisfied the demands of a scientific treatment would be a wretchedly bad picture in so far as its artistic effects were concerned. For example, an anatomical drawing of a tree would possess that precision and definiteness required by science, but it would lack that ineffable grace and beauty which would distinguish it as a work of art.

We argued that while their view of the predominance of the essentially artistic character of art might be freely conceded in the production of pictures for an art gallery, our business was the creation of pictorial materials that would teach certain specific facts. We pointed out that there was nothing degrading in claiming for works of art a function other than that of satisfying aesthetic pleasures. Works of art have contributed to the intellectual and moral education of mankind. In a so-called work of art the qualities of intellectual enlightment and moral elevation are indirectly communicated. They are subordinated and are not rendered so that they meet the eye with unescapable revelation. The observer standing in wrapt admiration before such a work is impressed foremost of all by the fact that the artist painted the picture not because he wished to teach, but because a dream of beauty took possession of his soul and it was his joy to express this beauty.

On the other hand, in a picture for a picturization, the observer is at once conscious that the picture teaches. It's educational function is not a part of the inner essence of the work, but is directly impressed. Whatever beauty or artistic appeal the picture possesses is incidental or secondary. By this it must not be taken for granted that the ideal element is debased. There is no need to so exalt the educative power of the picture that it weighs injuriously on the artistic aspects of the picture. Beauty can still pervade the background and shine through, giving the message conveyed by the picture a certain luminous quality and attraction.

A true artist is an individual in whom the zeal for revealing beauty is so uncommonly strong and eminent, that it marks him off from the bulk of mankind. Such a person will be happy to pass his life in portraying beauty. He will ask for no other task and will be satisfied with hardly anything more. Domestic affections, religion and science, he has no need for. He rejoices in his sense of beauty and finds in it relief from care and trouble. So absorbed is he and so strong is his love for his work that he goes through life relating everything to the desire in man for beauty.

Of course, none of our artists were so deeply engrossed in art that they could find complete solace in it. When we succeeded in getting them to shift their emphasis in portrayal from the artistic to the educative, we discovered another obstacle. In art schools students are taught that the function of art is to reveal imagination and originality and that these factors are second only to beauty. By this token, a painting of a Redwood would be original if it exhibited the cones of the tree to be as big as apples and as red as apples. If, in the artist's imagination, a Redwood was more inspiring in appearance if it possessed purple oak-like leaves, then, it should be depicted as having purple oak-like leaves.

It was with no little difficulty that we won our point that the pictorial materials do not comprise an interpretation of nature as seen through a temperment. The Redwood reproduced on the canvas should not basically reveal the emotional response which the tree has stirred in the artist. It must be a life-like representation and must transfix on the canvas both the actual form and color of the living tree in every detail. In fine, it must approach absolute realism.

A photograph is a mechanical reproduction of nature. From the standpoint of what is copied exactly, it cannot be exceeded in a work of art. In this light, all that would be required for a pictorial would be very fine photographs colored by the most able of craftsmen. But would such materials suffice for a pictorial whose mission and justification for existence is that it teaches? If our end were mere copies of nature, then, there would be no rhyme or reason for existence, because the real thing, the great living exhibit itself would be alone sufficient. The significance of the pictorial is that it attempts to impress on the park visitor facts which the living exhibit does not portray to untrained eyes and to do so in a manner that can be readily grasped and understood. Photographs, therefore, being very perfect copies of nature, have the same shortcomings as the object photographed and are, in this sense, not at all preeminently useful in teaching.

It was only after much patience, much hard and long striving, that the most capable artists were able to transfix the exact likeness of leaf, twig, bark, and other characters of a Redwood or its associates. They uniformly complained that it was like learning anew. It was necessary to master a technique different from any they had previously employed. In the beginning they were not strivers after minute and painstaking fidelity. From the outset they were strangers to the habit of doing things accurately. After they had acquired a taste for precision, they rather enjoyed the discipline. The labor of reproducing an exhaustive representation was not as jejune and wearing as they first supposed it would be.

They admitted after several months had passed that in this acquirement they had experienced an enlargement. After many month's of training they were mindfull of the differences between trees and between different parts of trees. They looked upon a forest with other and larger eyes than they had hitherto. Because of their critical scrutinizing, new colors, new forms, new lights and shadows sprang into existence. They came, at last, to recognize that it was no despicable talent which enabled an artist to catch up and arrest the fugitive and ever changing colors of a forest and to fix its exact character with startling realism.

Months were consumed in this process of inducing the artists to give up their old gods and turn out works of instruction instead of works of beauty, imagination or originality. In fact, more than a year had passed before our best artists were conscientiously bending their utmost effort on the communication of information in their paintings. We had commenced to capitalize on our many and long months of patient perservering and preparation. and we were actually in the act of reaping the harvest of all our striving and training. It was a joy to observe how telling every stroke of pen or brush had become. In other words, we were beginning to feel the zest of success. The project had come to itself.

W. P. A.

Project 2873

List of Active Personnel August 1, 1937.

Supervisor

J. D. Ellsworth

Artists, Sr.

Dye, Clarkson
Nakashima, Violet
Richter, Herman

Artists, Jr.

Kiehl, Eve
Marotto, Norma

Draughtsmen, Sr.

Crandall, Mary
Vallangca, Robert

Draughtsmen, Jr.

Tarbitt, Ruth

Photographers, Sr. P.

Havorka, Stanley

Photographers, Sr. N.P.

Croft, John

Cabinet Makers

Alstrand, Eric

Sign Painters

Ridder, Herman

Stenographers, Sr.

McJunkin, Isabelle
Michealis, Mathilda
Snover, Stella
Vyenielo, Irene
Williams, Muriel

Clerk

Active list continued

Clerks, Senior

Green, Sade

Clerks, Junior

Gneri, Frank
Howard, Ethel

Janitors and Watchmen

De Soto, Ernest

Total number of personnel	22

SEQUOYAH

SEQUOYA

1761 - 1843

In 1847, the Austrian botanist, Stephen Endlicher, published a synopsis of the cone-bearing trees of the world. In this celebrated work the Redwood was correctly described for the first time. The scientific name given to the tree was:

Sequoia sempervirens

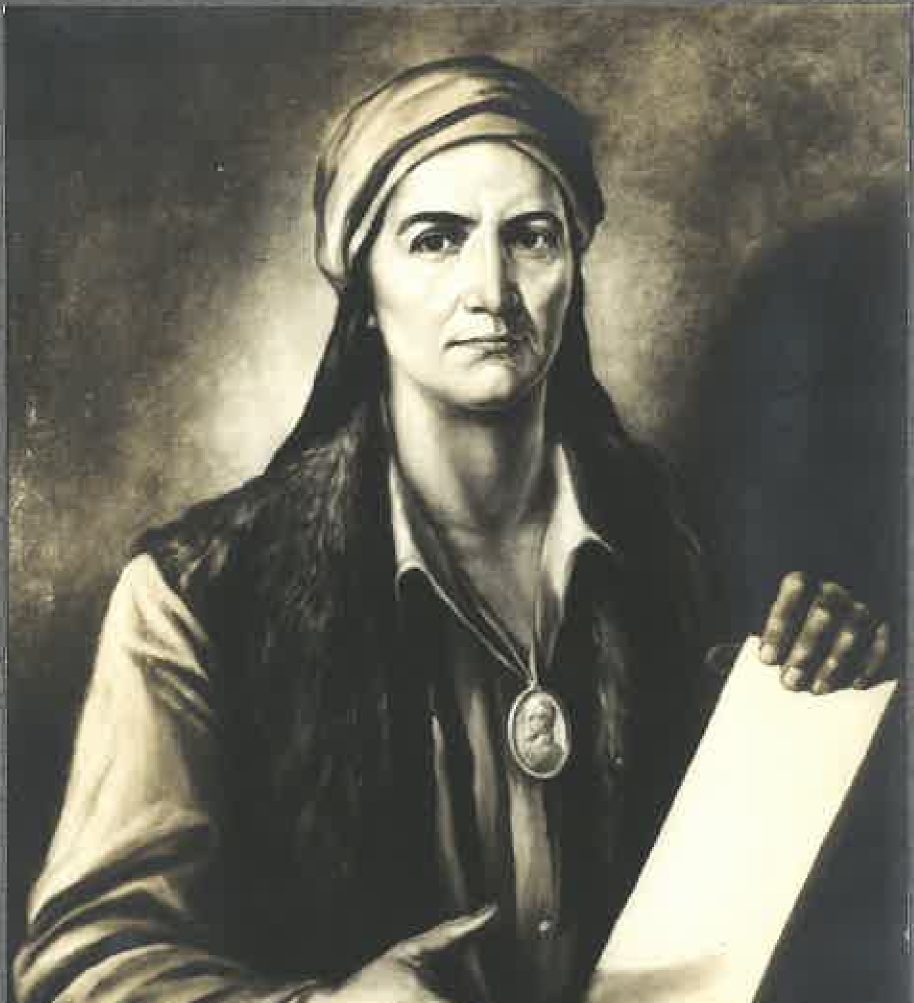
The word, sempervirens, means always green or ever living, while Sequoia is the lantinized form of Sequoyah and honors the greatest intellectual produced by the American Indian.

Sequoyah was a Cherokee who lived in the southern Appalachians and who passed his boyhood there during the time of the American Revolution. Rendered a cripple for life while hunting, he was forced into an inactive life and spent much time in reflection. He observed the cupidity for land, avarice for gold and oppressiveness of the white man and attempted to save his people from extermination through the invention of his remarkable alphabet. Believing he could elevate the Cherokee, he gave them the power of written expression and enabled his whole nation to read and write.

History offers no parallel of a savage appealing to the power of the pen. Almost without exception the savage turned to the sword for defense. Sequoyah, endowed with a great intelligence and truly a genius, sought the most sublime means of salvation for his people ever attempted by the red man.

The botanist Endlicher thought it a fitting tribute to name the world's tallest tree after this intellectual giant. He considered that Sequoyah towered as high above his contemporaries as the Redwood does over all other American trees.

When Sequoyah went to Washington, D. C., in 1828 to negotiate a treaty for his people, he was hailed as the American Cadmus. (Cadmus was the legendary Greek God who brought the alphabet to the Greeks.) While in Washington, Sequoyah sat for his portrait. This likeness is taken from the original painting.



JUSTIFICATION FOR SCIENFIFIC SERIES

SIGNIFICANCE OF COVER PAINTING

The activities portrayed in the cover painting are far more significant than at first appears on the surface. They constitute a link in an unfortunate chain of changes which tend to influence the living conditions of the Redwoods and to disturb their natural state. Unless these practices and others of a like nature can be stopped by means of education and devices such as this Pictorial History represents, the Redwoods in the parks will suffer an early decline and death. The fundamental purpose for which the parks were created will be defeated. Future generations will not enjoy the Redwoods as it was intended they should by those who saved the Redwoods from the lumberman.

Because of the difficult technical and scientific nature of this grave problem facing the Park administrators and the immediate need of educating the public before the damage becomes irretrievable, this Pictorial History has a very significant role to play. It is anticipated that this self-educating device will have an important part in helping to save the Redwoods.

The problem is new and little is known about it generally. In order to impress its true nature and character, a short article follows on the physiology of the Redwoods, especially those parts of the tree that man may harm.

HOW MAN HARMS THE REDWOODS

The Redwood Parks of California were created for the benefit of succeeding generations and to this end were saved from immediate destruction by lumberman. While most of these parks are of every recent origin, one park in particular, the Big Basin Redwoods, has had some thirty-five years use. Human intrusions and civilized developments have gone on apace in the very heart and verdant center of the Big Basin forest. Now, after this relatively brief span of human use, it appears that the very trees which inspired the movement to bring about the acquisition of the park are in imminent danger.

Paradoxical as it may seem these trees have not been truly protected under man's care and, if present practices prevail will not be enjoyed by the generations of the future. Changes have been in progress which have influenced the living conditions of the Redwoods for the worse. These changes appear to be accomplishing the opposite of what was intended as the future for these Redwoods of the park. Indeed, it seems that the spectacular and best known feature trees of the park may not live long enough to round out their natural lives. Thus, while these trees have been spared from an outright and speedy doom, they are to suffer from another menace which will insure their slow and progressive decline.

It is a well known and accepted fact that trees grown old under pristine conditions are not tolerant to sudden changes. This is especially true if the changes are of the nature which civilized man introduces. It is asserted by an authority, Dr. E. P. Meinecke, that even a species of such vitality as Redwood, exhibits an inability to adjust itself to a rapid overturning of the environment which the tree has enjoyed for centuries.

In the case of the celebrated veterans of the Big Basin another factor must be considered. These trees are suffering from serious set backs, because fire has made large breaks in the living connections between roots and crowns. Fire wounds around the bases of their trunks have impaired the perfect functioning of all the vital parts of the tree and have reduced the avenues of bark and cambium that remain are doing more than merely carrying out their normal functions. These living connections are actually straining to repair the damage caused by fire. Accordingly, they have taken on an overload--the burden of reuniting the broken circumference of the tree's base. The tree's resources are being drained to the utmost in the manufacture of new healing tissues to bring about recovery of these lost functioning areas and to permit the tree to a gain flourish complete in all its vital parts.

In a report to the Division of Parks on, "The Effect to Excessive Tourist Travel on the California Redwood Parks," Dr. Meinecke says, "With the exception of the Santa Clara Tree, which has suffered but little, every one of the world famous veterans is more or less seriously injured. Connection between bole and roots is reduced by one-fifth to onethird, and in the case of the Chimney Tree the loss equals two-thirds of the circumference".

Redwoods, like the Father Tree that exhibit gnarled and contorted roots and a great flare to their bases, offer a challenge to man to clamber about their curious formations. Witness a party of tourists sauntering along the Redwood Trail. Ignorant of what they are doing, the more agile climb about the burly outgrowths, Some desire to be photographed. Some wish to sense the timber producing of the tree or its overwhelming bigness by coming into actual contact with it. Some are merely doing what almost countless others before them have done. The route is plainly marked over the burly contortions, for a well worn path points the way and how every foot step must be placed.

The continual repetition of this performance wears away the protecting bark. In time the vital tissues under the bark are exposed. Repeated abrasions tend to widen the exposure at a more rapid rate that the healing tissues can repair the damage. The result is that a specific area on the base of the tree ceases to perform its normal function as an avenue for food materials traveling downward from the crown and feeding the growing tissues. Continued wear and exposure to sun and wind dries out the sapwood. In turn, a small part of the water lifting machinery of the tree ceases to function. In effect, the continual climbing about the base of the tree becomes a cumulative evil. The water budget of the tree is pared down. This means in turn a reduction of the amount of food stuffs manufactured in the leaves and the consequent further impairment of the possibility of repairing the fire wounds.

Besides this place where the roots coverage--where all the necessary solutions taken from the soil must pass in order to reach the crown of the tree and where all the food nutrients must also pass--there is another area, the root spread, that man may harm.

It seems hardly necessary to emphasize in this connection a well known and accepted fact, namely, that "All the living parts of the tree stand in close relation to each other, so that any far-reaching interruption of the system of interconnecting elements and tissues is certain to insure profound disturbances." Now as already suggested, the roots of the Redwood (aside from serving as an anchorage for the trees) serve in supplying the tree with water and mineral salts from the ground. Obviously, any interference with the functioning of the root system which tends to interrupt the normal flow of water and mineral salts through the sapwood is bound to have its effect upon the normal development of food and in the end upon the health and life of the tree.

It truly is unfortunate that nature has developed the Redwood so that the most important feeding parts of its root system is near the surface. The rootlets that function so primarily in supplying the tree with water and mineral salts are surprisingly shallow. Dr. Meinecke states that this part of the root system is within one to three feet from the surface of the soil. "It is from these roots that the great mass of feeding roots and rootlets spring, which in normal soils, remain so close to the surface that the soil around the tree for 3 to 4 inches in depth is closely interwoven with a loose felt of fine rootlets."

To understand the significant effects of tourist traffic on the root system and the life of a Redwood, it is important to have clearly in mind some details on the physiology and function of the root system. The fine root endings which are so near the surface are the real feeders and they function best under a certain set of conditions. The layer where they grow under normal conditions is kept fresh and cool by the assemblage of shrubs, ferns and small plants. The accumulation of old leaves and twigs and the like makes up a layer of litter which when disintegrated make up important elements of the raw food. The breaking down of this litter is the result of a highly complex interplay of fungi, bacteria and other small animal life. These can only carry out their beneficial roles if they have certain specific requirements satisfied, such as, for example, looseness of soil, proper aeration and adequate moistness.

The positions of all these interrelated functions and relationships have been determined by endless trials through the ages. Minor discords in the ancient balance, slight disturbances in the adjusted assemblage, may not prove disastrous. But the continued interference which has an adverse cumulative effect is found to constitute an unbalancing. The persistence of unfavorable living conditions in the end will prove disasterous.

It is self-evident, if these be the facts in the case, that man can set up adnormal conditions within the soil beneath Redwoods. By removing the ground cover of herbaceous plants, he first interferes with the interrelations and systems of linkages that enter the valuable and beneficial functions of keeping the soil fertile. By stripping the soil bare of litter and tramping down the surface soil, by changing its character from an undisturbed, loose and well aerated soil to a hard, tough sheet that sheds water and excludes air, he secondly sets up abnormal conditions, severs the natural exchange between soil and atmosphere and disrupts the disintegration and formation of needed raw food compounds. By concentrating in ever greater numbers and continuing to intensify the use of the area, he thirdly brings about an excess of adverse conditions. By heaping injury on injury, he lastly conspires to effect the early decline of the very trees which he realy wishes to preserve.

CASE ONE AND TWO

REDWOODS ANCESTRY

ORIGINIAL PROSPECTUS

THE REDWOOD'S ANCESTRY

DEPICTING LAND LIFE OF THE AGES

From the Age of Fishes to the Age of Reptiles

Two Maps, seven scenes in water color and five formation charts showing:

1. Map of the world with small tree symbols at locations where fossil records of Redwoods have been found.

2. Map of California and Southern Oregon with present-day distribution of Coast Redwood and Big Tree indicated in contrasting color.

3. Two scenes of Age of Fishes

   Under water scene of highest forms of life for Devonian period.

   Lagoon showing earliest fish forms that attempted life for a brief space out of water and suggesting how land life began! Tree-like forms and rushes that took on the dignity of trees are shown as the plants of the period.

4. Scene of Age of Amphibians

   A swamp with rich vegetation and outstanding animal life.

5. Four scenes of Age of Reptiles

   Triassic period showing first successful invasion of the land by reptiles.

   Jurassic period showing earliest birds and flying reptiles.

   Cretaceous period showing Tyrannosausus and Triceratops and impressing their extinction while the Sequoias lived on.

Jurassic Age estimated one hundred and forty million years ago. Margins of an inland sea with characteristic plant life stressing cycads and ginkos and the earliest Sequoias. The great Brontosaurus, one of the largest beasts of all times anddesignated the "thunder lizard" and the ornate Stegosaurus are shown. The Redwood's ancestors commenced in this period. The great size of the present trees suggests that the Redwood is the survivor of an age when living things were monstrous.

6. Five charts of formation column giving geologic record and showing skeleton and plant remains of animals and plants depicted in the scenes.

Purpose: To convey pictorial concept of the place of the Redwood's ancestors in the land life of the ages.

To depict the former wide-spread distribution of the Redwood across the face of both northern hemispheres.

To show its present day diminished habitat.

THE REDWOOD'S ANCESTRY

A LIVING LINK IN EARTH HISTORY

The Redwood is one of two surviving Sequoias and can boast of an ancestry almost fabulous. The Sequoia family tree is traced into the dim long ago--back for about 140 million years. The ancestral line is so old, in fact, that it staggers the imagination of one who tries to grasp how truly long has been the duration of the tree's so-journ on the earth.

The records of the Sequoia's descent are found in the rocks of the earth. They occur in the form of impressions of leaves and cones. Occasionally, large pieces of trunks have been petrified.

Scientists have dug up sufficient of the record to reveal a truly wonderful story. It commences in that remote period of the past known as the Age of Reptiles. At this time the long vanished dinosaurs held the dominant place in the life of the earth. Most of the vegetation was of a type no longer living.

Another point that sheds light on the Sequoia's amazing history is the fact that when the race commenced, even the continents had not yet assumed their forms as we know them today. Such great mountain systems as the Alps, the Andees, Himalayas and the Rockies had not been elevated.

In that far off time, the story reveals how the Sequoia's ancestors spread over North America, Western Europe and Eastern Asia. Then, as the land masses changed and the climate varied, the mighty and grostesque reptiles, along with the whole races of ancient plants, were snuffed out of existence leaving no descendants. Amazing as it may seem, the Sequoias lived through these vicissitudes.

As the Age of Mammals was ushered in, a new type of life came to power. Alert, hairy mammals, with higher intelligence, took over the rule of the earth. While the mammals developed and branched out into many different forms, the Sequoias extended their range into new territory until they flourished over three continents.

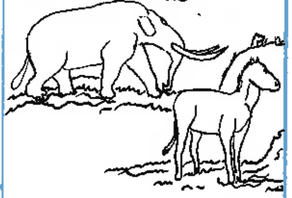
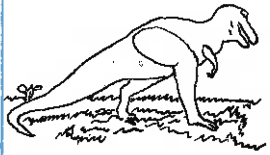
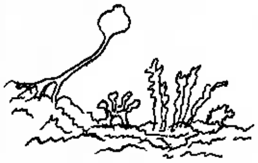
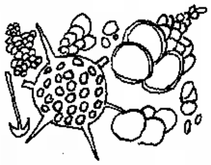
In their rise, they competed with a great variety of new and higher plant types and appear, from the record, to have won out to a striking degree. In the Miocene epoch they are very abundant in the fossil record and reached the zenith of their dominion.

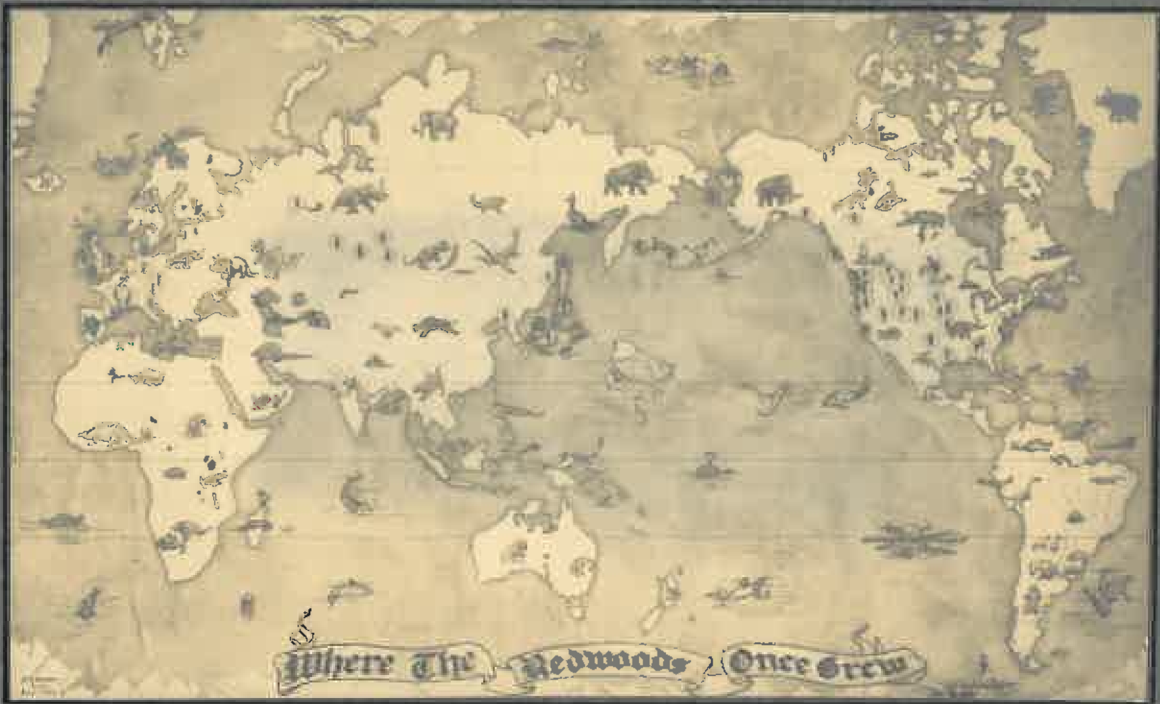
During the closing days of the Age of Mammals, and before man's rule of the earth, the Sequoias again met with the difficulties of a changing world. Their boundless forests, covering hill and valley and rising and falling with the topography and vanishing in the distance, were depauperized as great ice sheets crept down from the north. At least three times the larger part of both northern hemispheres became white worlds.

In the Old World, the mountain chains running east and west imposed insurmountable barriers. The Mediterranean, Caspian and Black Seas blocked the southward migration of those Sequoias that attempted to escape the chilling empire of ice by fleeing through the mountain passes. In the New World, the Sequoias succeeded in escaping to the southland, but the trials of the migration northward proved so great that only two species returned.

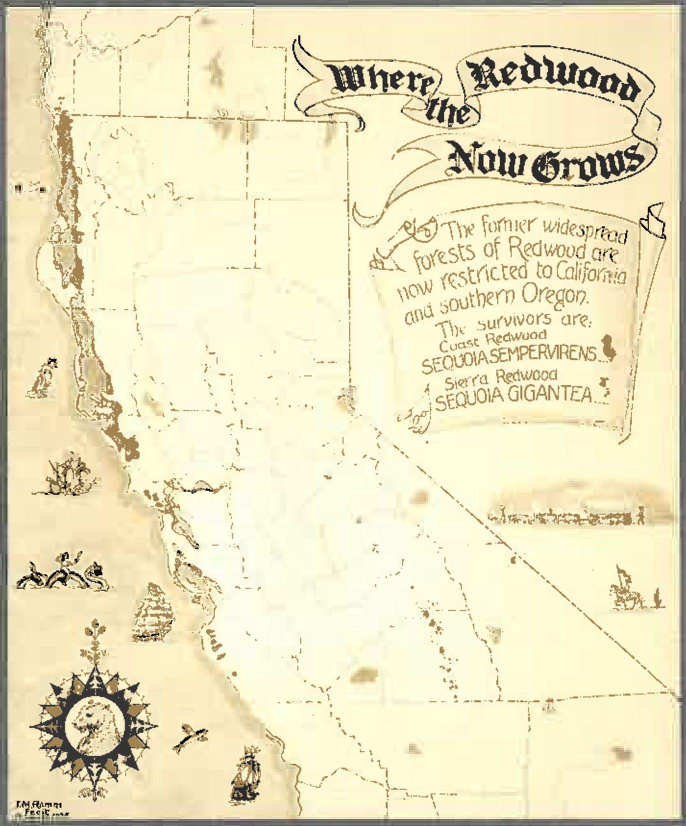
It is this singular survival that prompted John Muir to say:

"The Sequoia belongs to an ancient stock, and has a strange air of other days about it, a thoroughbred look inherited from the long ago -- the Auld Lang Syne of trees".

ERAS		PERIODS	DURATION IN YEARS	DOMINANT LIFE	CHARACTERISTIC LIFE
CENOZOIC	⬜	RECENT	10 000	MAN	
	⬜	PLEISTOCENE	1 000 000		
	⬜	PLIOCENE	6 000 000	MAMMALS	
MESOZOIC	🟨	MIOCENE	12 000 000		
	🟨	OLIGOCENE	16 000 000		
	🟨	EOCENE	20 000 000		
	🟨	PALEOCENE	5 000 000		
	🟨	CRETACEOUS	65 000 000	REPTILES	
	🟨	JURASSIC	35 000 000		
	🟨	TRIASSIC	35 000 000		
PALEOZOIC	🟩	PERMIAN	25 000 000	AMPHIBIANS	
	🟩	CARBONIFEROUS	85 000 000		
	🟩	DEVONIAN	50 000 000	FISHES	
	🟩	SILURIAN	40 000 000		
	🟩	ORDOVICIAN	85 000 000	INVERTEBRATE	
	🟩	CAMBRIAN	70 000 000		
PROTEROZOIC	🟥	UPPER PRECAMBRIAN	650 000 000	PRIMITIVE MULTICELLULAR FORMS	
ARCHEOZOIC	🟫	LOWER PRECAMBRIAN	650 000 000	UNICELLULAR FORMS	



Where The Redwoods Once Grew



Where the Redwood Now Grows

The former widespread forests of Redwood are now restricted to California and southern Oregon.

The survivors are:

Coast Redwood SEQUOIA SEMPERVIRENS

Sierra Redwood SEQUOIA GIGANTEA

THE REDWOOD'S ANCESTRY

As the scientist views the great earth-drama enacted through the ages he sees the earth as a stage. Countless multitudes of living creatures have played their little parts and have gone their way into extinction. It is a remarkable fact that the Sequoia's ancestors have played a magnificent role on this earthly stage. Living links, with the past, they still survive as an "unaccountable oversight" from an age when things were molded on a monstrous scale.

Dr. John C. Merriam in his famous book, "The Living Past", says, "With whatever turn of fancy one views this forest, it must always be recognized as a living link in an epic of history. No one who knows the outlines of its story can look down the long vistas, between gigantic columns, with the mystery of their changing shadows beyond, without feeling that he has seen through a window into the deeper reaches of time, and had come to fuller understanding of the stream of life as it is followed through the yearss

The portrayal which follows attempts to give a glimpse of the pageant of land life on the globe from its beginning to the present age in order to impress the antiquity of the Sequoia's Ancestors.

One can but wonder at the persistence of such a living form practically unchanged for eon after eon, while all around was dissolution and evolution.

THE REDWOOD'S ANCESTRY

SCENES FOR THE AGE OF FISHES AND AGE OF AMPHIBIANS

Also method employed to convey graphically by means of an accompanying chart of earth column how the animals depicted became fossils. Through incorporation in the rocks of the earth's crust, their remains were preserved for the later edification of man.

The portrayal emphasizes the changes in animal life. The choice of the animal kingdom instead of the plant kingdom is based on the fact that animal changes are more striking and apparent to the casual observer. It is true that the plants have changed. However, their changes have been more of a structural change than of external appearance.

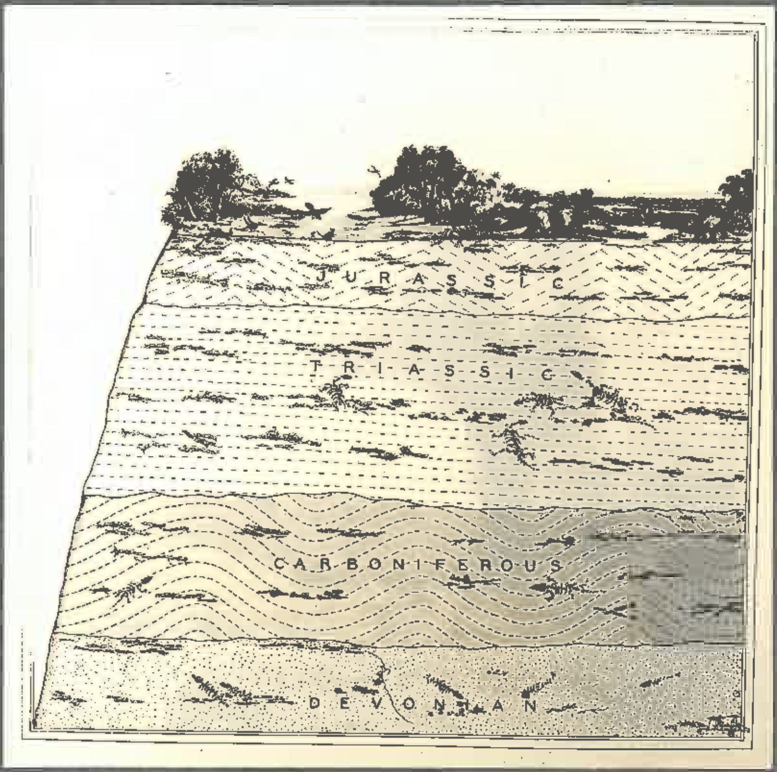
THE REDWOOD'S ANCESTRY

FORMATION COLUMN

Enlargement of formations column for Jurassic Period having two scenes; one scene early birds and flying reptiles, the other, Brontosaurus and Stegosaurus.

The scenes portrayed are duplicated at the top of the column. The skeletons being entombed suggest how the fossil is formed together with the fact that the most recent fossils, in an ideal section, would be found nearest the surface, and those more ancient, deep down.

Each succeeding preceding scene is represented by a different colored column to convey the idea of the successive deposits that make up the Paleontologic record. The animals and plants are shown as they are found in the rocks, with the exception of being completely assembled. In a popular presentation, it was felt necessary to keep the remains intact in order to picture clearly what they represented.


JURASSIC
TRIASSIC
CARBONIFEROUS
DEVONIAN

THE REDWOOD'S ANCESTRY

TWO LOWER SCENES

AGE OF FISHES

DEVONIAN PERIOD

A concept of the Sequoia's ancestry is here portrayed through glimpses of the land of the ages.

In that far off time, known as the Age of Fishes, many millions of years ago, only the seas were teeming and alive. The land was, as yet, uninhabited by any form of animal life. The upper picture shows two of these earlier adventurers in a new and hitherto unanimated world. They were unable to spend but a brief time out of water, and so sprawled in the mud only a short distance from the water's edge.

Strange and grotesque were the plants that clothed the land. They were all without flowers. Because no life was upon the land, there was a complete absence of insects, reptiles, birds and mammals.

Surely, could we have walked through these archaic fern forests, they would have impressed us as uncanny.

THE REDWOOD'S ANCESTRY

TOP SCENE

AGE OF AMPHIBIANS

CARBONIFEROUS PERIOD

Adventuring out of water has continued. By the time of the Age of Amphibians, great, heavy-bodied brutes, like the giant Salamander shown here, emerged from the fresh water lakes and swamps which then covered a large portion of the earth's surface. Insects, also, have appeared. Enormous cockroaches crept through the undergrowth, and huge dragon flies, thirty inches across the wings, were the rulers of the air.

Plant life has forged ahead. Vast coal forests border the lakes and swamps, flourishing exceedingly in the dense and steaming atmosphere.

AGE OF REPTILES

TRIASSIC PERIOD

It is a real undertaking for a water animal to become fitted to live on land. The method of getting about freely must be changed and the ability to walk substituted for swimming. The method of breathing must likewise be different and involves the use of oxygen direct, instead of oxygen dissolved in water.

Once, however, nature had successfully accomplished this change, land animals developed amazingly. The dinosaurs, in particular, were the first to outstrip all other forms of land life. For wierdness, bizarre shape and monstrous size, they have never been excelled.

AGE OF REPTILES

JURASSIC PERIOD

By Jurassic time, land life had made such a decided advance that reptiles had taken over the center of the earthly stage and were the lords of all creation. Even the empire of the air had been invaded, and the first feathered creatures had appeared.

In the lower picture the strange birdlike Archaeopteryx, with front legs transformed into wings and a peculiar feathered tail, may be compared with the leather-winged reptiles or Pterodactyls.

Though most of the trees were palm-like plants called cycads, variety was added to the landscape by the appearance of the first ancestors of the Sequoias shown in the left center of the scene.

Within the presence of these earliest Sequoias, the Brontosaurus may have drawn itself heavily out of the water and collapsed on the shore to bask. The gigantic size of this monster, weighing many tons, caused its discoverer to name it, "The Thunder Lizard," because the great beast was large enough to shake the ground. Stegosaurus, also, may have fed in the vicinity of the first Sequoias. This reptile with its armored back and spiny tail is perhaps the most ornate of the dinosaurs. Truly, the Sequoias are survivors of an age of extinct monsters!

AGE OF REPTILES

CRETACEOUS PERIOD

It seems incredible that the Sequoia's ancestors were contemporaneous with these nightmarish reptiles. Tyrannosaurus was king of the tyrant lizards of his day, and the largest flesh eater that ever lived. Equally awesome and formidable was Triceratops a vegetable feeder.

While the reign of the reptiles drew to a close, the Sequoia's ancestors continued and became widespread. They lived through many changes going on all about them; saw new races springing up--the flowering plants spreading their mantel of fragrance over the earth, and the rise of horses, dogs, cats and man himself.

CASE THREE

WORLDS TALLEST AND BROADEST OF TREES

ORIGINAL PROSPECTUS

THE WORLD'S TALLEST AND BROADEST OF TREES

REDWOOD AND BIG TREE

One map and four charts in color showing:

1. Map of California with details of present day range and distribution of two species of sequoia given in contrasting colors. Principal forests and groves named.

2. World's Tallest Tree -- the Founder's Tree, in Dyerville Flat, Humboldt County -- 364 feet high. A coast Redwood (Sequoia sempervirens.)

3. World's most massive tree -- Sherman Tree in Giant Forest, Tulare County -- 37.4 feet in diameter. A big Tree (Sequoia gigantea.)

Both trees drawn to same scale to show contrasts of size and height.

4. Superlatives of California Redwood Park. Coast Redwood:

   a. Santa Clara Tree, world's broadest Coast Redwood at breast height -- 17 feet, nine inches in diameter.

   b. Coast Redwood cone, foliage and seed in exact color and size.

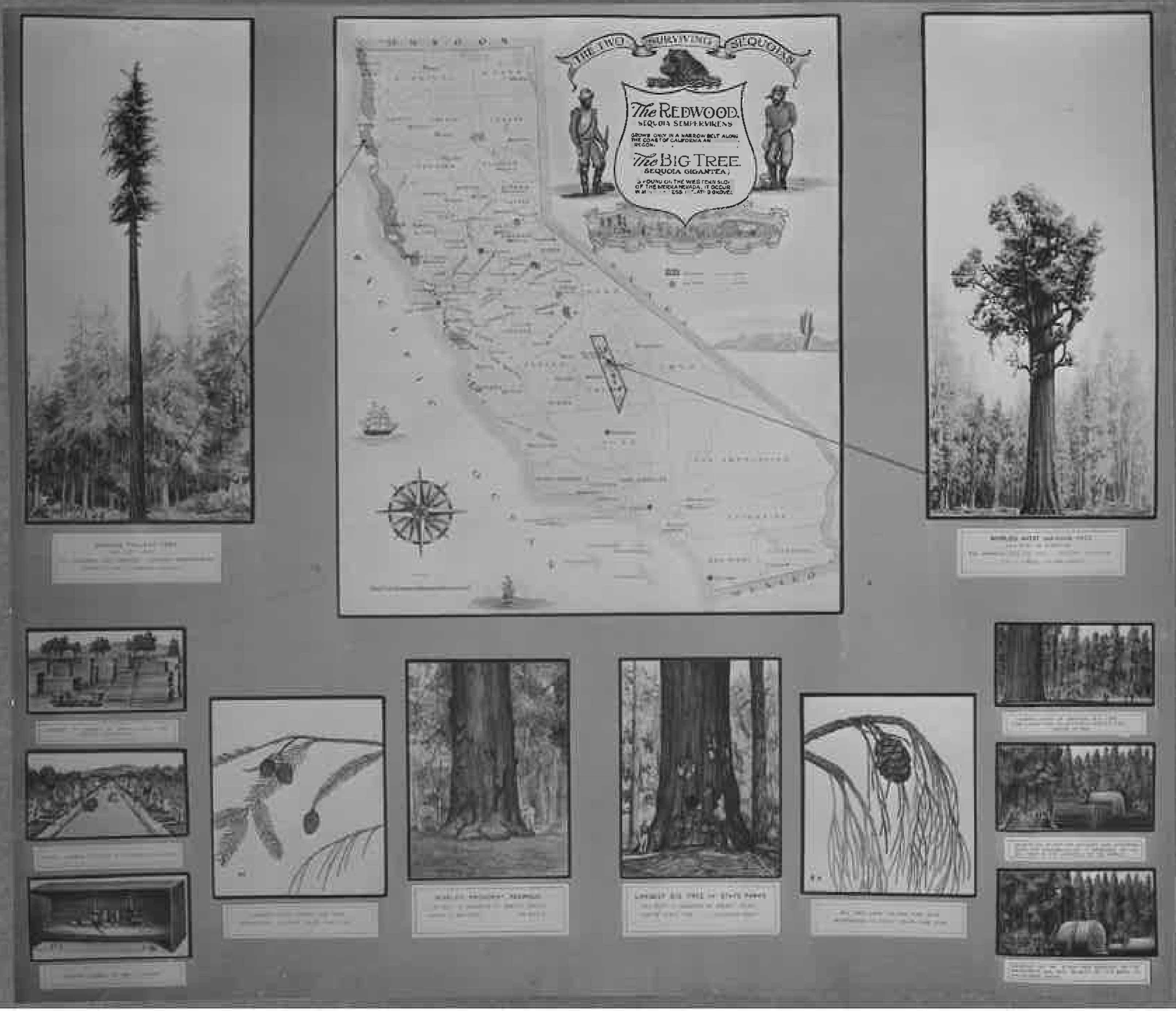
   c. Three smaller pictures:
      1. Lumber yard containing amount of board feet (200,000) estimated in the Santa Clara Tree.
      2. Cruiser boxed with lumber from the tree.
      3. Scene of a street with fifteen five room bungalow made from boards from the tree.

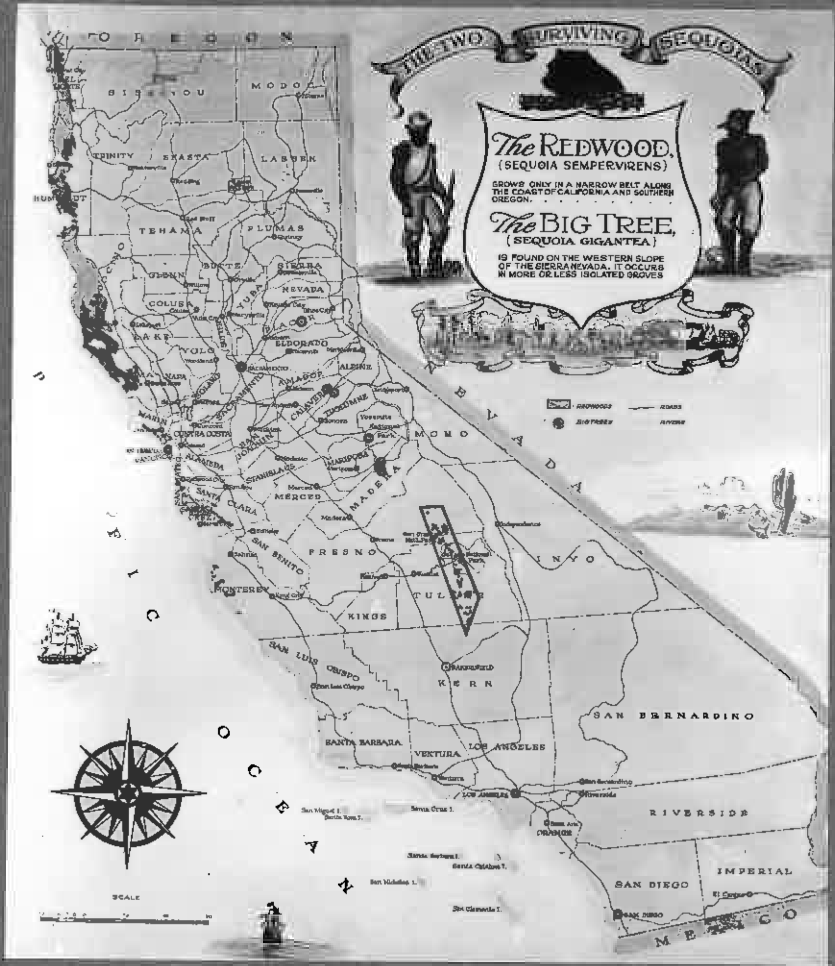
5. Superlatives of Calaveras Grove - Big Tree or Giant Sequoia:

   a. Empire State (Largest in Grove)
   b. Big Tree cone, foliage and seed in exact color and size.
   c. Three smaller pictures showing historic

scenes of preparation of original "Big Tree" in Calaveras Grove for exhibition in Atlantic States and Europe.in 1854. (The removal of the bark from this tree in sections and the assembling of these sections just as they appeared when affixed to the tree, gave the public the first tangible evidence of the great size of the California Mommoth Trees.)

Purpose: To impress the difference in size, appearance and character between Coast Redwood and the Big Tree or Giant Sequoia. To show in sufficient detail range and distribution of the two Sequoias.


THE TWO SURVIVING SEQUOIAS
The REDWOOD.
SEQUOIA SEMPERVIRENS
GROWS ONLY IN A NARROW BELT ALONG THE COAST OF CALIFORNIA AN REGON.
The BIG TREE.
(SEQUOIA GIGANTEA)
IS FOUND ON THE WESTERN SLOPE OF THE SIERRA NEVADA. IT OCCURS IN ISOLATED GROVES.


THE TWO SURVIVING SEQUOIAS
The REDWOOD,
(SEQUOIA SEMPERVIRENS)
GROWS ONLY IN A NARROW BELT ALONG THE COAST OF CALIFORNIA AND SOUTHERN OREGON.
The BIG TREE,
(SEQUOIA GIGANTEA)
IS FOUND ON THE WESTERN SLOPE OF THE SIERRA NEVADA. IT OCCURS IN MORE OR LESS ISOLATED GROVES
REDWOODS
ROADS
BIG TREES
RIVERS
OREGON
SISKIYOU
MODOC
TRINITY
SHASTA
LASSEN
HUMBOLDT
TEHAMA
PLUMAS
BUTTE
SIERRA
GLENN
NEVADA
COLUSA
LAKE
YOLO
ELDORADO
ALPINE
NAPA
AMADOR
MARIN
CONTRA COSTA
ALAMEDA
CALAVERAS
TUOLUMNE
MONO
MARIPOSA
STANISLAUS
SANTA CLARA
MERCED
MADERA
FRESNO
SAN BENITO
MONTEREY
INYO
KINGS
TULARE
SAN LUIS OBISPO
KERN
Bakersfield
SAN BERNARDINO
SANTA BARBARA
VENTURA
LOS ANGELES
RIVERSIDE
ORANGE
SAN DIEGO
IMPERIAL
MEXICO
NEVADA
PACIFIC OCEAN
San Miguel I.
Santa Rosa I.
Santa Cruz I.
Santa Barbara I.
Santa Catalina I.
San Nicholas I.
San Clemente I.
SCALE

THE WORLD'S TALLEST AND BROADEST OF TREES

Right: The world's most massive tree, a Giant Sequoia or Big Tree, General Sherman, Sequoia National Park (drawn to scale.)

Left: The world's tallest tree, a Coast Redwood, the Founders Tree, Dyerville Flat, Dyerville State Park (drawn to scale.)

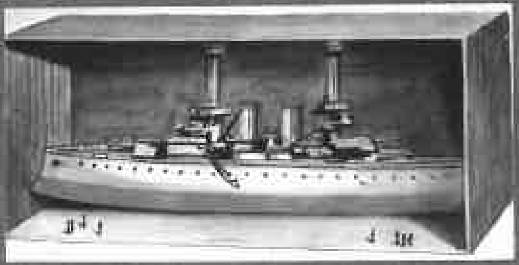
THE WORLD'S TALLEST AND BROADEST OF TREES

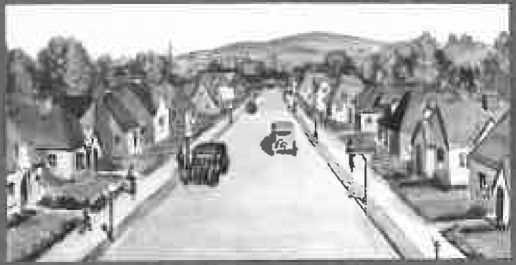
Illustrative means to depict amount of lumber in a large Redwood, the Santa Clara Tree in Big Basin Redwood State Park.

1. Street with fifteen five room bungalows built from lumber from the tree.

2. Battle Cruiser boxed with lumber from the tree.

3. Yard containing approximately 200,000 board feet of lumber from the tree.





THE WORLD'S TALLEST AND BROADEST OF TREES

Largest Big Tree in State Parks, a Giant Sequoia or Sierra Big Tree, Empire State Tree, Calaveras Grove. 29.6 feet in diameter at breast height.

Exploitation of the largest standing Big Tree in the Calaveras Grove in the fifties in ways shown in these pictures, brought the great trees of California to the notice of the civilized world, and convinced European doubters as to the exceptional size of the world's largest trees.

The scenes depict:

Boring down of original Big Tree for exhibition in Atlantic States and Europe in 1853.

Smoothing stump for dancing and stripping bark for assembling as it appeared on the "Big Tree" in the capitols of the world.

Dancing on the stump and bowling on the prostrate Big Tree bereft of its bark in Calaveras Grove.

CASE FOUR

THE STREAM OF HUMAN EVENTS IN A REDWOODS LIFETIME

THE STREAM OF HUMAN EVENTS WITHIN A REDWOOD'S LIFETIME

The oldest Redwood accurately counted by competent scientists has lived throughout all the eventful centuries since Julius Caesar landed in Britain, 44 B. C. This tree measured more than eighteen feet in diameter and, grew in the Dyerville State Redwood Park, Humboldt County. Blown over by a storm, the Division of Parks had the tree cut into sections, one of which is to be included as a major feature of this Pictorial History.

The paintings which follow are screwed across the center of the great face of the log which is mounted on a massive Redwood easel. The painting is to be placed in the immediate vicinity of the tree ring which was produced by the tree at the time of a historic event. By means of observing the sweep of history depicted by these scenes, the beholder will gain an insight into the great age of the Redwood. He will be impressed. In fact, he will gain an impression which no printed description could possibly make, of nearly two thousand years of unbroken life.

In the majority of cases these paintings are original reconstructions from history and are not mere copies of paintings already extant.

ORIGINAL PROSPECTUS

THE STREAM OF HUMAN EVENTS WITHIN A REDWOOD'S LIFETIME

Twenty historical scenes in water color showing:

1. Caesar landing in Britain, 44 B. C.
2. Birth of Christ, 0
3. Battle of Chalons, 451 A. D.
4. Vandal sack of Rome, 455
5. Hegira, 623 A. D.
6. Battle of Tours, 730 A. D.
7. Leif Ericson discovers America, 1000
8. Capture of Jerusalem by Godfrey, 1099, Peter
9. Crusades, Peter the Hermit, 1115
10. Marco Polo, 1268
11. Invention of Printing, 1446
12. Fall of Constantinople, 1453
13. Columbus, Discovery of America, 1492
14. Reception of Columbus at Court, 1492
15. Luther at Diet of Worms, 1521
16. Landing of the Pilgrims, 1620
17. Sir Francis Drake Discovers California
18. Napoleon at Battle of Pyramids, 1799
19. Duke of Wellington after Battle of Waterloo, 1816
20. Lincoln and his cabinet, 1863
21. Lindberg Crosses the Atlantic, 1927.

TITLES FOR SCENES

THE STREAM OF HUMAN EVENTS WITHIN A REDWOOD'S LIFETIME

Upper Scene

Julius Caesar Lands in Britian, 55 B. C.
(Deal, England, 55 B. C.)
Farthest Expansion of Roman Civilization in Western Europe.

Center Scene

Birth of Christ, I.
(Bethlehem, 1 A. B.)
Beginning of the Christian Era.

Lower Scene

Emperor Valerian in Chains before King Sapor the Persian, 260.
(Ctesiphon, 260 A. D.)
Roman Expansion in the East Checked by Neo-Persian Triumph over Byzantium.

THE STREAM OF HUMAN EVENTS WITHIN A REDWOOD'S LIFETIME

TITLES FOR SCENES

Upper Scene

Battle of Chalons
(On Plains of Mauriazen, 451 A.D.)
Seeds of European Civilization Saved
from Destruction by Attila's Huns.

Lower Scene

Vandal Sack of Rome
Entrance of Aleric into Rome, 455 A.D.

TITLES FOR SCENES

THE STREAM OF HUMAN EVENTS WITHIN A REDWOOD'S LIFETIME

Upper Scene

Mohammed's Hegira, 622

(Flight from Mecca)
Beginning of the Mohammedan Era

Lower Scene

Battle of Tours, 732

(Old Poitiers)
Mohammedan Conquest of Western Europe
Crushed by Charles Martel.

THE STREAM OF HUMAN EVENTS WITHIN A REDWOOD'S LIFETIME

TITLES FOR SCENES

Crusades

(Capture of Jerusalem by Godfrey, 1099 A.D.)

Christianity Regains the Birthplace of the Savior.

THE STREAM OF HUMAN EVENTS WITHIN A REDWOOD'S LIFETIME

TITLES FOR SCENES

Upper Scene

Leif Ericson Discovers America
(Markland, Nova Scotia, 1000 A.D.)
Conquest of the Sea by Norsemen.

Center Scene

Fourth Crusade--King Richard Coeur de Lion
Captures the Port to Jerusalem. (Jaffa, 1292 A.D.)
Mediaeval Europe Emerges from the Isolation of
the Dark Ages.

Lower Scene

Marco Polo Visits the Mongol Court of Kublai
Khan in Cathay, (Khan Baligh, 1274 A.D.)
First Europeans Reach the Far East.

THE STREAM OF HUMAN EVENTS WITHIN A REDWOOD'S LIFETIME

TITLES FOR SCENES

Upper Scene

Columbus Lands in a New World
(Isle of Guanahani (San Salvador) 1492, A.D.
Europeans Seek New Routine to the Orient.

Lower Scene

Reception of Columbus at Court before
Ferdinand and Isabella, 1492.

TITLES FOR SCENES

THE STREAM OF HUMAN EVENTS WITHIN A REDWOOD'S LIFETIME

Upper Scene

Sir Francis Drake Visits California, 1579

(Drakes Bay)
Maritime Exploration Circles the Globe

Lower Scene

Landing of the Pilgrims on Plymouth Rock, 1620

(Plymouth Rock)
Beginning of the American Commonwealth.

THE STREAM OF HUMAN EVENTS WITHIN A REDWOOD'S LIFETIME

TITLE FOR SCENE

Luther at Diet of Worms, 1521
Beginnings of Protestantism and
the Reformation.

TITLES FOR SCENES

THE STREAM OF HUMAN EVENTS WITHIN A REDWOOD'S LIFETIME

Upper Scene

Duke of Wellington after Battle of
Waterloo, 1816.

Giant Sequoia originally named in
honor of Duke of Wellington.

Center Scene

Lincoln and his Cabinet, 1863.

Lower Scene

Lindberg Crosses the Atlantic, 1927.
Conquest of the Air by Modern Mechanics.

CASE FIVE

HOW REDWOODS REPRODUCE

HOW REDWOODS REPRODUCE

The following depiction, "How Redwoods Reproduce" is in many ways the most outstanding in the whole portrayal. Much time was lavished in securing the original specimens, and elaborate pains were exercised in making the paintings so that they would have foremost popular appeal. The subject matter is highly technical and the successful portrayal here is proof of how well the artists have mastered the subject matter and how highly their skill has developed in this special field.

ORIGINAL PROSPECTUS

HOW REDWOODS REPRODUCE

Ten charts in water color showing:

1. Enlargement six times of the "Male" Redwood Flower.
2. Enlargement six times of the "Female" Redwood Flower.
3. Natural size painting of position of "male" female" flowers and method of fertilization.
4. Enlargement six times of "female" flower one month after fertilization.
5. Enlargement six times of developing cone a month later.
6. Enlargement six times of developing at third month of growth.
7. Enlargement six times of fully developed Cone.
8. Cross-section showing seeds and nature of their placement within the Cone.
9. Life sized painting of mature cone before shedding seeds ahd mature cone in act of shedding its seeds.
10. Pictorial drawing of seed falling to earth and tiny seedling just getting its first start in life.

[illegible] "MALE" FLOWERS OR STAMINATE CATKINS PRODUCE [illegible] [illegible] DEVELOP MOSTLY ON THE SIDE OR LATERAL [illegible] FERTI[illegible] EACH CATKIN BEARS TWO [illegible]

[illegible]

[illegible] ABUNDA[illegible] AND CONT[illegible] [illegible]

WHEN WINTER COMES AND ALL IS IN KEEPING WITH THE GREAT SLEEP OF NATURE, IT IS BLOSSOM TIME FOR THE REDWOOD. DURING DECEMBER OR JANUARY TH[illegible] HEAVILY-LADEN POLLEN-SACS OF THE "MALE" FLOWERS BURST AND SHED THEIR G[illegible] GRAINS. AT THE SAME TIME, THE "FEMALE" FLOWERS OPEN TO RECEIVE THE POLLEN. FERTILIZATION COMMENCES AFTER THE DOWNWARD DRIFTING POLLEN-GRAINS ARE CAUGHT IN A THICK FLUID AT THE ENTRANCE OF THE OVULES OF THE SCALES. HERE IN THE OVULE IS FOUND THE EGG CELL OR OVUM FROM WHICH THE SEED LATER DEVELOPS.

[illegible] TAKING ON ITS [illegible]

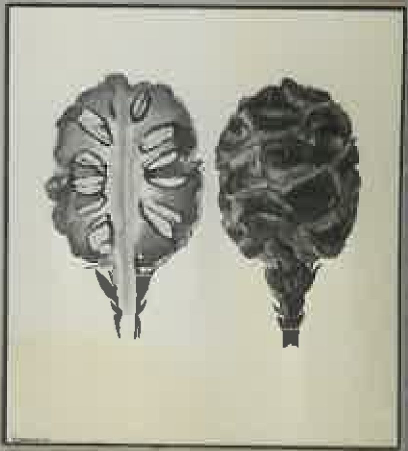
[illegible]

THE KERNEL OF THE SEED, NO BIGGER THAN THE DIAMETER OF A COMMON NEEDLE, CONTAINS THE ACTUAL GERM. FEW FAIL TO MARVEL THAT SO MINUTE A SPECK CAN INITIATE ANOTHER GREAT REDWOOD. UNDER PROPER GERMINATING CONDITIONS, THE TINY SEED SENDS DOWN INTO THE MINERAL EARTH A SPEAR-LIKE ROOT, THEN A TINY STEM DEVELOPS AND THE LEAF BLADES SLOWLY PUSH THE HULL AWAY BURSTING APART AS THE HULL FALLS TO THE GROUND.

IN THIS MODEST WAY, NATURE STARTS HER TALLEST OF LIVING TREES

[illegible]

[illegible]



[illegible]

TITLE FOR SCENE

HOW REDWOODS REPRODUCE

UPPER CENTER LEGEND

The "Male" flowers or staminate catkins produce the pollen. They develop mostly on the side or lateral shoots of the fertile branches. Each catkin bears two to five pollen-sacs.

CENTER LEGEND

When winter comes and all is in keeping with the great sleep of nature, it is blossom time for the Redwood. During December or January the heavily-laden pollen-sacs of the "Male" flowers burst and shed their golden grains. At the same time, the "Female" flowers open to receive the pollen. Fertilization commences after the downward drifting pollen grains are caught in a thick fluid at the entrance of the ovules of the scales. Here in the ovule is found the egg cell or ovum from which the seed later develops.

LOWER CENTER LEGEND

The "Female" flowers or ovulate catkins become the cones. They develop on the end or terminal shoots of the fertile branches. Each of the many spirally arranged scales bear five to seven ovules.

HOW REDWOODS REPRODUCE

TITLES FOR SCENES

Upper picture

About a month after fertilization, the complicated development reaches the stage where the catkin "closes" due to the growth of the scales.

Left Hand Center

A month afterwards the scales show something of their final shape. Each si armored by a "Thorn" or bract which later becomes insignificant.

Right Hand Center

Here in the third month after fertilization the cone is taking on its regular form.

Lower Picture.

The nature cone is a fitting symbol of abundance. The average cone is no larger than a cherry and contains some sixty seeds. Not less astonishing is the tiny size of these seeds. They appear altogether too small for such giant trees as Redwoods.

TITLE FOR SCENE

HOW REDWOODS REPRODUCE

By the end of summer the mature cone begins to open and shed its seeds. Every slight breeze moving through the upper tops of the trees will liberate seeds in great quantity. They may be observed by the thousands in their glancing and wavering fall to the forest floor. The hull, flattened on both sides to wing-like thinness, enables the seeds to travel a considerable distance.

TITLE FOR SCENE

HOW REDWOODS REPRODUCE

The kernel of the seed, no bigger than the diameter of a common needle, contains the actual germ. Few fail to marvel that so minute a speck can initiate another great Redwood. Under proper germinating conditions, the tiny seeds sends down into the mineral earth a spear-like root, then a tiny stem develops and the leaf blades slowly push the hull away, bursting apart as the hull falls to the ground.

In this modest way, nature starts her tallest of living trees.

CASE SIX

HOW REDWOODS GROW AND FEED

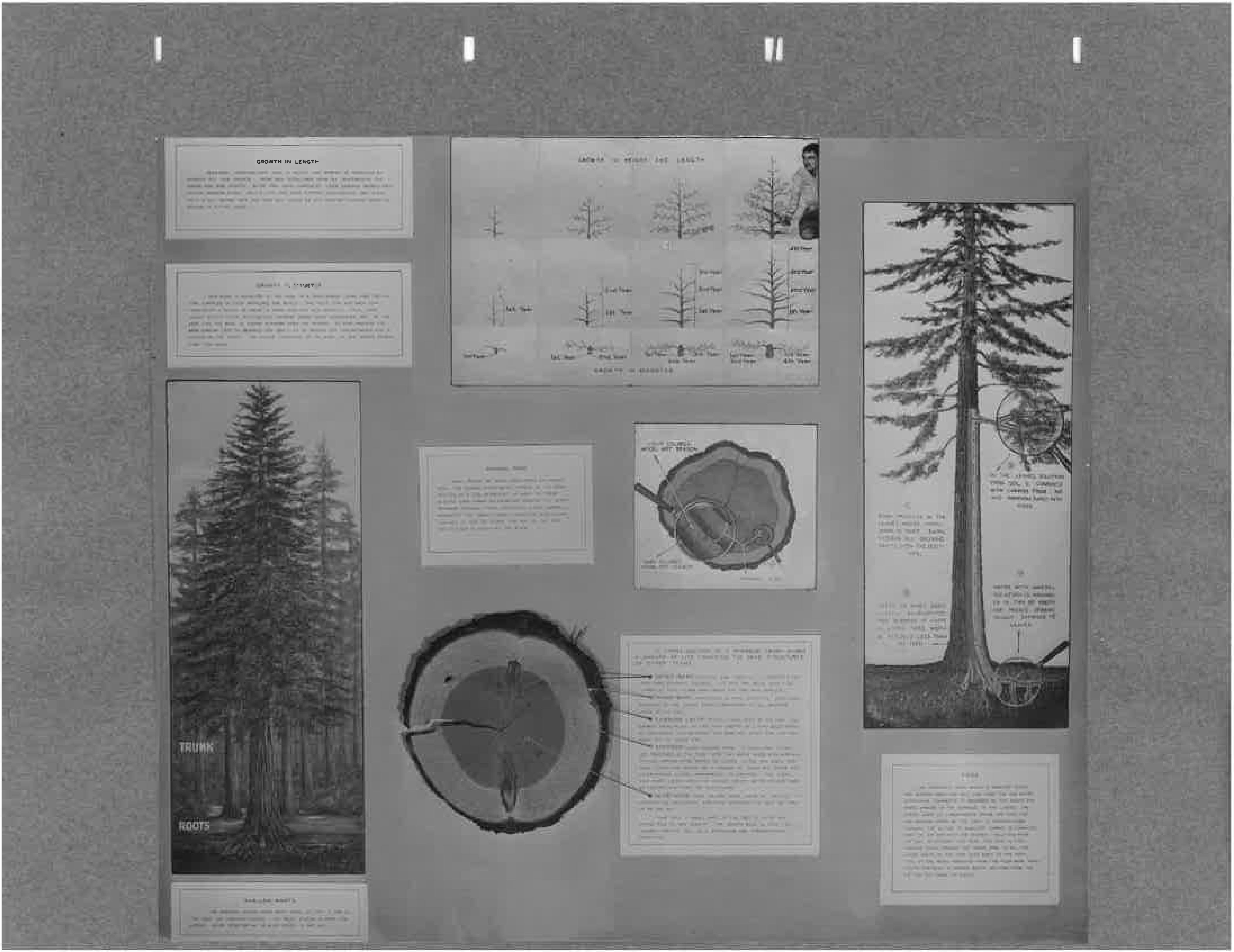
ORIGINAL PROSPECTUS

"HOW REDWOODS GROW AND FEED".

Five charts in oil showing:

1. Manner in which Redwoods grow in length and girth and how annual ring is formed.
2. Full-length portrait of Redwood. Shallow root system stressed.
3. Detailed painting of Cross section of Redwood trunk explaining what the annual ring is and how it is composed of summer wood and spring wood.
4. Cross section of actual Redwood trunk. Colored strings running from specimen to legend indicate outer bark, inner bark, cambium, sapwood and heartwood. Impresses what parts of tree are alive and what parts are dead or inert.
5. Parts of tree that function is food getting and utilization of nutrients for growth.

Purpose: To lay the foundation for the depiction which follows in the next case by showing what parts of a tree are alive and essential to the well being of the tree.


GROWTH IN LENGTH
TRUNK
ROOTS

HOW REDWOODS GROW AND FEED

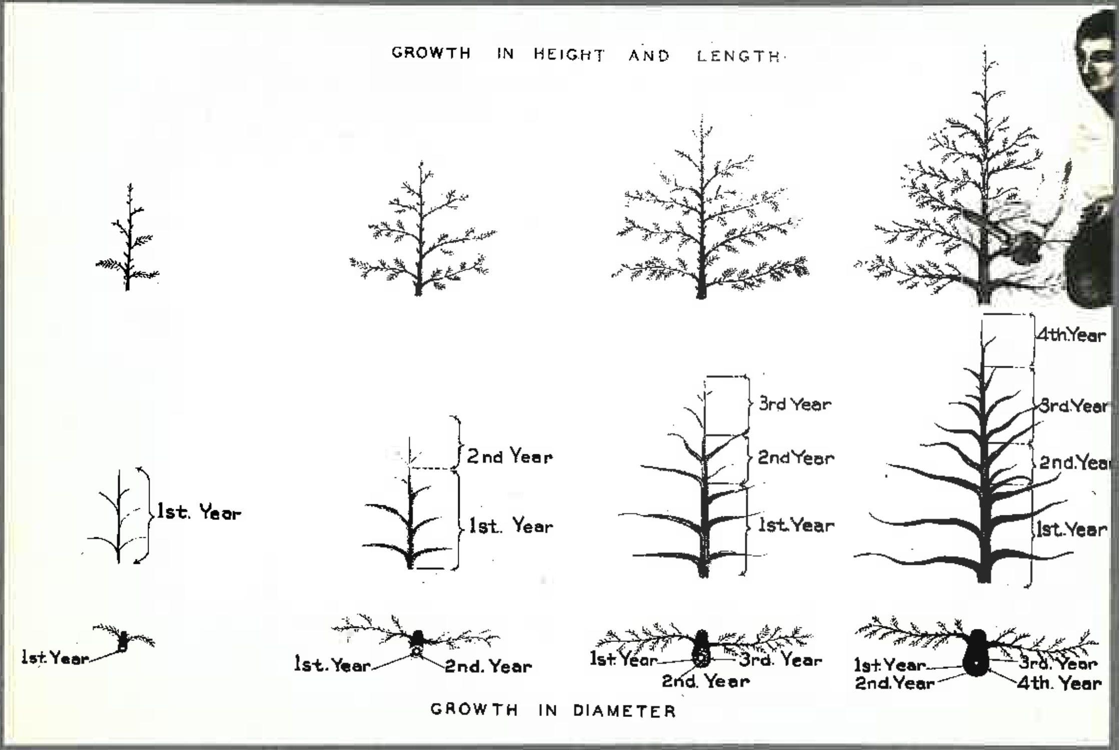
GROWTH IN LENGTH

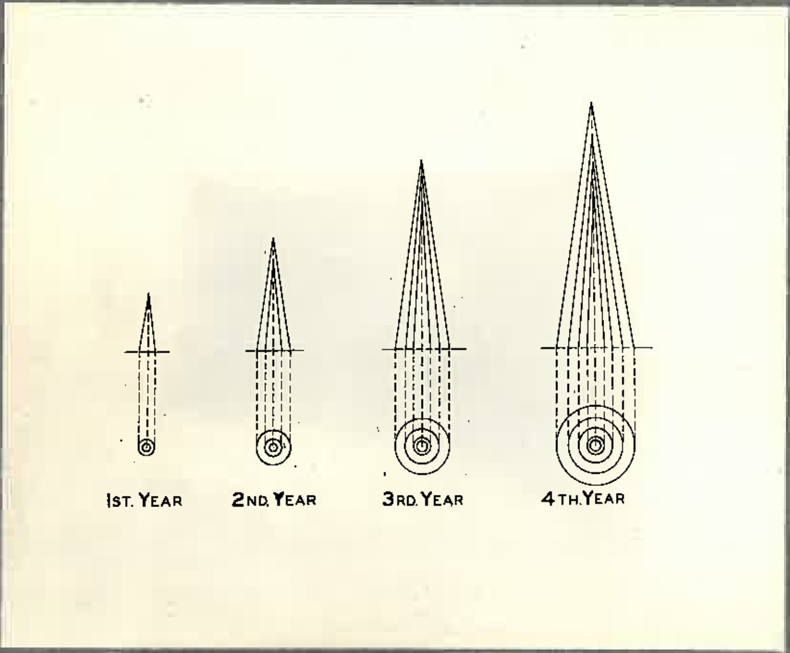
Redwoods increase each year in height and spread of branches by sending out new shoots. These new structures grow by lengthening the leader and side shoots. After they have completed their season's growth, their length remains fixed. Only at the tips does further lengthening take place. Thus, a mail driven into the tree will never be any great distance from the ground in future years.

HOW REDWOODS GROW AND FEED

GROWTH IN DIAMETER

New wood is deposited in the form of a cone-shaped layer over the entire surfaces of stem branches and roots. The next year and each year thereafter a sleeve of wood is added over the old covering. Thus layer stands within layer successively wrapped about each succeeding one. At the same time the bark is pushed outward from the center. In this process the bark earlier laid on becomes too small to go around the circumference and is cracked by the strain. The fluted character of the bark on old trunks arises from this cause.


GROWTH IN HEIGHT AND LENGTH
4th.Year
3rd Year
3rd.Year
2nd Year
2nd Year
2nd.Yea
1st. Year
1st. Year
1st.Year
1st.Year
1st.Year
1st. Year
2nd. Year
1st.Year
3rd. Year
2nd. Year
1st.Year
2nd.Year
3rd.Year
4th. Year
GROWTH IN DIAMETER


1ST. YEAR
2ND. YEAR
3RD. YEAR
4TH. YEAR

TITLE FOR SCENE

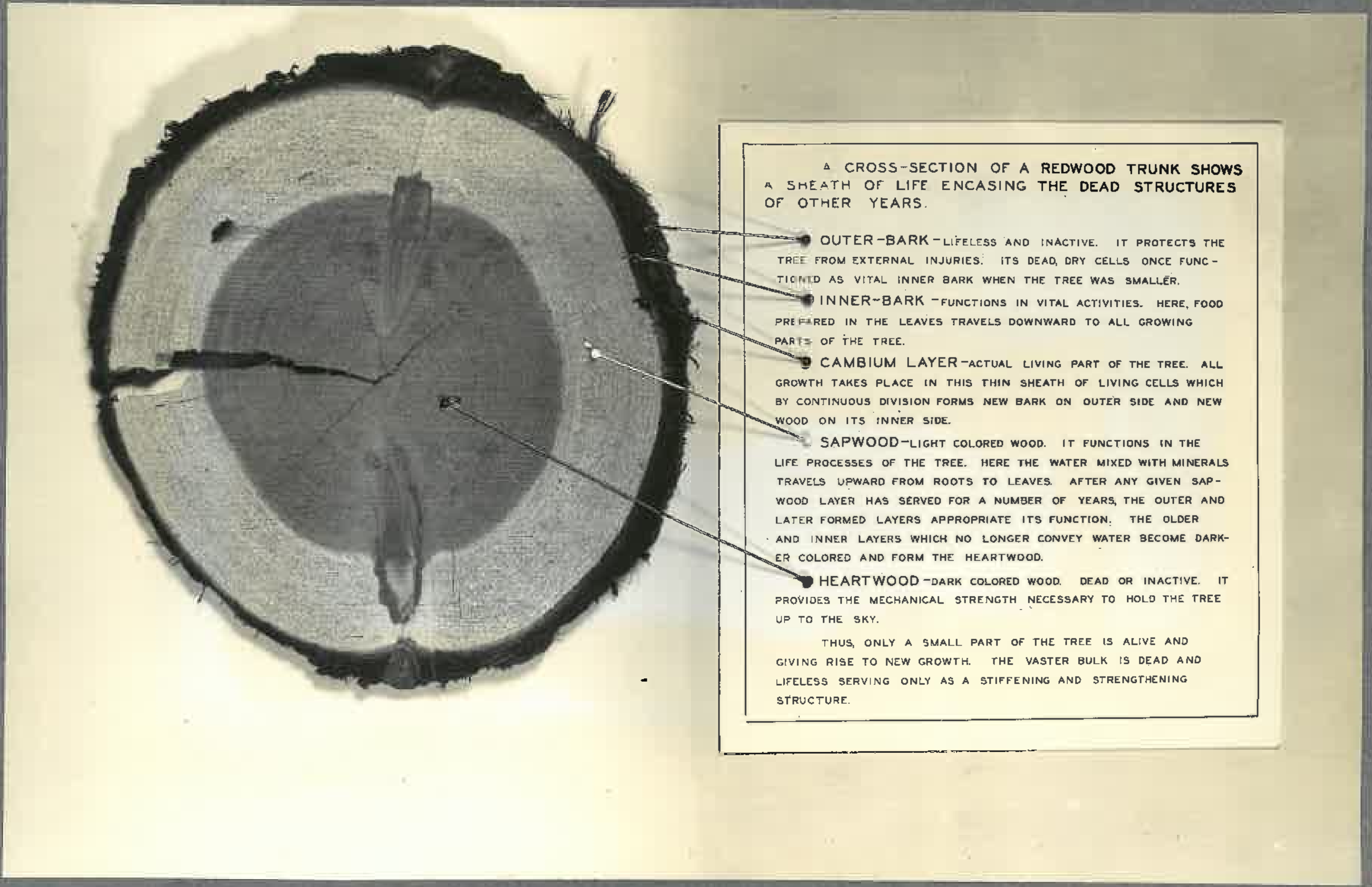
HOW REDWOODS GROW AND FEED

CENTER

SHALLOW ROOTS

The Redwood differs from most trees in that it has no tap root or central anchor. The root system is near the surface never penetrating to much depth in the soil.

TRUNK
ROOTS



A CROSS-SECTION OF A **REDWOOD TRUNK SHOWS** A SHEATH OF LIFE ENCASING **THE DEAD STRUCTURES** OF OTHER YEARS.

OUTER-BARK–LIFELESS AND INACTIVE. IT PROTECTS THE TREE FROM EXTERNAL INJURIES. ITS DEAD, DRY CELLS ONCE FUNCTIONED AS VITAL INNER BARK WHEN THE TREE WAS SMALLER.

INNER-BARK–FUNCTIONS IN VITAL ACTIVITIES. HERE, FOOD PREPARED IN THE LEAVES TRAVELS DOWNWARD TO ALL GROWING PARTS OF THE TREE.

CAMBIUM LAYER–ACTUAL LIVING PART OF THE TREE. ALL GROWTH TAKES PLACE IN THIS THIN SHEATH OF LIVING CELLS WHICH BY CONTINUOUS DIVISION FORMS NEW BARK ON OUTER SIDE AND NEW WOOD ON ITS INNER SIDE.

SAPWOOD–LIGHT COLORED WOOD. IT FUNCTIONS IN THE LIFE PROCESSES OF THE TREE. HERE THE WATER MIXED WITH MINERALS TRAVELS UPWARD FROM ROOTS TO LEAVES. AFTER ANY GIVEN SAPWOOD LAYER HAS SERVED FOR A NUMBER OF YEARS, THE OUTER AND LATER FORMED LAYERS APPROPRIATE ITS FUNCTION. THE OLDER AND INNER LAYERS WHICH NO LONGER CONVEY WATER BECOME DARKER COLORED AND FORM THE HEARTWOOD.

HEARTWOOD–DARK COLORED WOOD. DEAD OR INACTIVE. IT PROVIDES THE MECHANICAL STRENGTH NECESSARY TO HOLD THE TREE UP TO THE SKY.

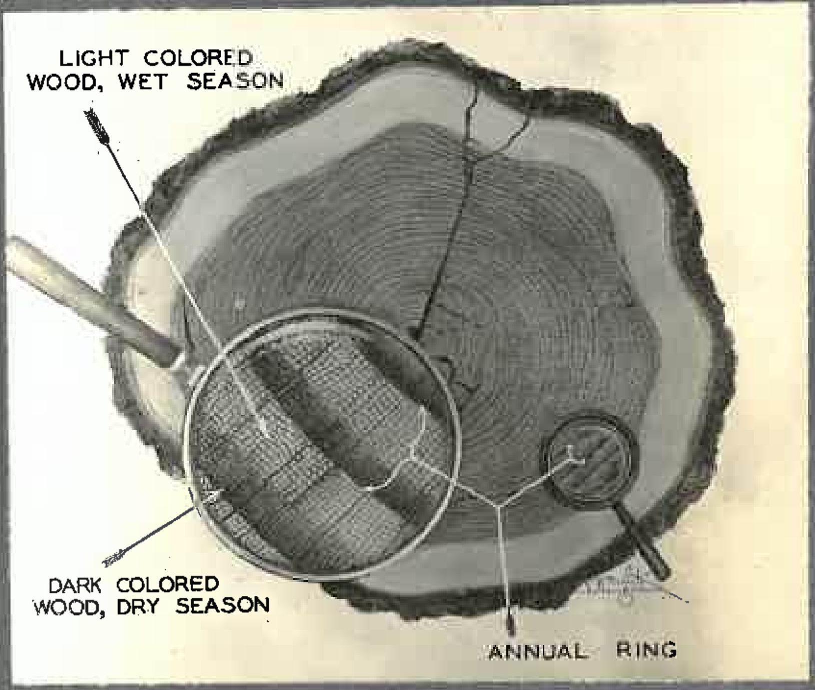
THUS, ONLY A SMALL PART OF THE TREE IS ALIVE AND GIVING RISE TO NEW GROWTH. THE VASTER BULK IS DEAD AND LIFELESS SERVING ONLY AS A STIFFENING AND STRENGTHENING STRUCTURE.

TITLE FOR SCENE

HOW REDWOODS GROW AND FEED

ANNUAL RING

Each sleeve of wood constitutes an annual ring. The annual rings which appear in the cross section of a log represent so many of these sleeves. Each forms an envelope around its inner neighbor. Because these concentric rings normally represent the yearly growth and eachring never changes in size or place, the age of the tree can be told by counting the rings.

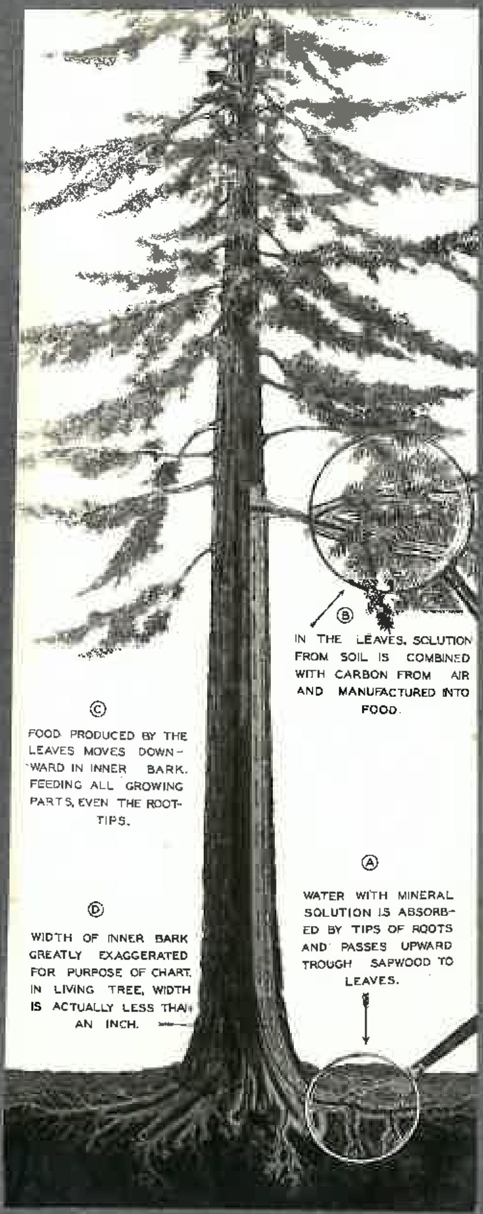

LIGHT COLORED WOOD, WET SEASON
DARK COLORED WOOD, DRY SEASON
ANNUAL RING

TITLE FOR SCENE

HOW REDWOODS GROW AND FEED

FOOD

The materials upon which a Redwood feeds are derived from the soil and from the air. Water containing nutrients is absorbed by the roots and moved upward in the sapwood to the leaves. The leaves serve as laboratories where the food for the growing parts of the tree is manufactured through the action of sunlight. Carbon is extracted from the air and with the mineral solutions from the soil is changed into food. This food is then carried down through the inner bark to all the living parts of the tree even down to the root tips. Of the wood produced from this food more than ninety per cent is carbon which has come from the air and not from the earth.



Ⓑ

IN THE LEAVES, SOLUTION FROM SOIL IS COMBINED WITH CARBON FROM AIR AND MANUFACTURED INTO FOOD.

Ⓒ

FOOD PRODUCED BY THE LEAVES MOVES DOWNWARD IN INNER BARK, FEEDING ALL GROWING PARTS, EVEN THE ROOT-TIPS.

Ⓐ

WATER WITH MINERAL SOLUTION IS ABSORBED BY TIPS OF ROOTS AND PASSES UPWARD TROUGH SAPWOOD TO LEAVES.

Ⓓ

WIDTH OF INNER BARK GREATLY EXAGGERATED FOR PURPOSE OF CHART. IN LIVING TREE, WIDTH IS ACTUALLY LESS THA AN INCH.

CASE SEVEN

WHY REDWOODS ARE LARGE AND OLD

ORIGINAL PROSPECTUS

WHY REDWOODS ARE LARGE AND OLD

Six scenes in oil showing:

1. Forest fire. Large Redwood in middle foreground burning; the fire having hollowed out a major cavity in the trunk.

2 & 3. Four successive related scenes of the same large Redwood as above showing what happens after two to three hundred years have passed and the tree has the chance to heal over the fire scar. Views depict the continuous slow covering of the scar from the margins of the wound.

   Lower part of drawing reveals in cross section the details of healing.

4. Same tree after wound is completely closed exhibiting abnormal response. Redwood burl produced. Explanation given of scientific interpretation of how burl is formed.

5. Close up of Redwood root system conveying nearness to surface of ground of the tender feeding rootlets. Legend stresses surface feeding nature of the tree.

6. Scene of a family "enjoying the wonderful Redwoods". Legend points out how the persistence of such practices by well-intentioned tourists impairs the food getting organs and deprives the tree of needed food supply. Also impresses how tourists can prevent fire scars from healing by destroying tender tissues through clambering about the burly base of the tree.

Purpose: Preservation of Redwoods through graphic presentation of how thoughtless man may impair the lives of Redwoods through interference with their vital functions.

CENTRAL LEGEND

WHY REDWOODS ARE LARGE AND OLD

Resistance and Vitality Explains Age

The answer to the question, "Why do Redwoods live so long," can be found in the remarkable resistance of the tree to natural enemies of the forest. Another reason for the tree's great age is due to the ability of the tree to recover from injuries of great magnitude which would be sufficient to bring about death in ordinary trees.

Title for Scene One

WHY REDWOODS ARE LARGE AND OLD

Fire is the great enemy of the Redwood. Because of the thick, asbestos-like protecting bark and the absence of pitch or resin, together with the fact that the damp wood burns with marked sluggishness, fires seldom destroy a Redwood outright. Hot fires burn cavaties in the mature trees and very often enlarge old cavities. Hence, the large black scars are mute evidence of conflagrations in the past that have reduced most of the forest to ashes.

Nearly all the celebrated giants of the Park display fire wounds. Insome instances the tree has made repeated attempts to repair the damage and has been prevented from doing so by recurring fires.

Title for Scene Three

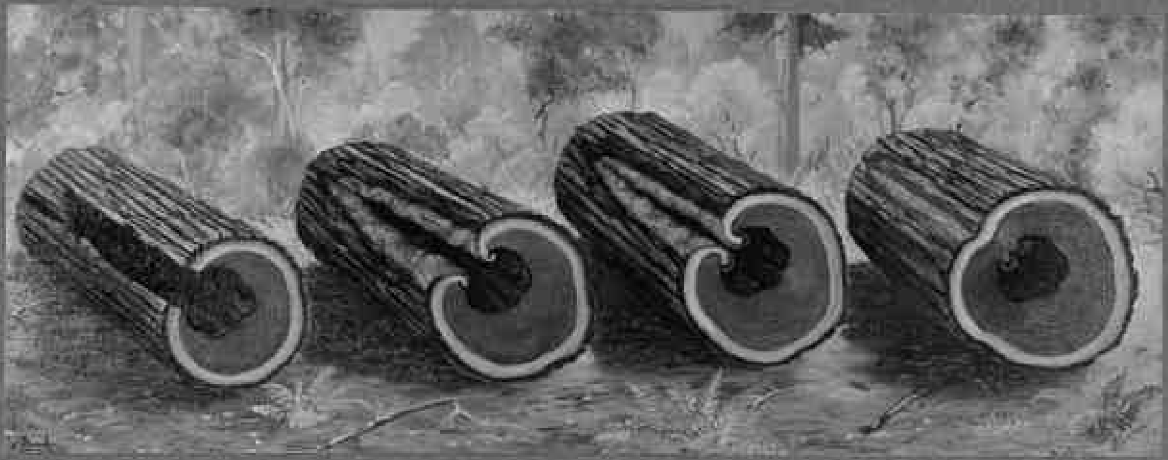
WHY REDWOODS ARE LARGE AND OLD

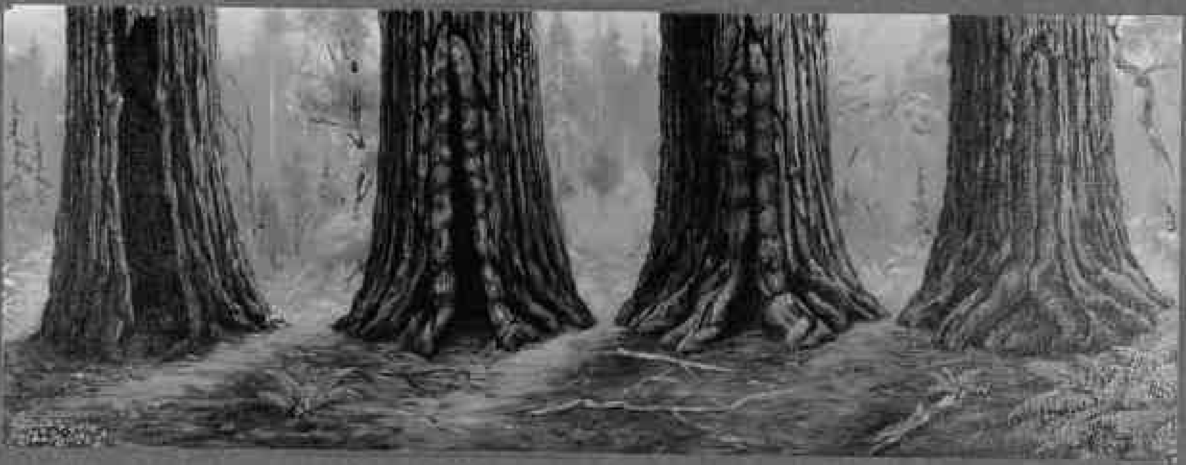
A fire scar at the base of a Redwood means that fire has destroyed the living connections between roots and trunk. The tree has lost a portion of a vital area through which water and mineral nutrients are lifted upward to the leaves and food passed downward to the roots below. Because the normal and healthy life of the tree depends upon the complete functioning of the entire trunk and all its connecting passages, the tree always attempts to repair the damage by reuniting the broken connections.

This is done by healing the wound through slowly bridging the area with new and living wood and bark. The healing occurs from the margins of the scar by the gradual extension of new layers of wood and bark. As the healing proceeds there is no union between the enfolding layers of new wood and old wood of the charred surface. Each new layer encroaching over the dead area of the scar is a single annual ring.

It should thus be realized that the healing is very slow. If there is no interference, the healing tissues, in time, will slowly creep across the surface of the wound, reuniting the broken living circle.

Constant climbing about the burly outgrowths of the base of the Redwoods, where such healing is taking place, interferes with this patient process of repair. The healing tissues are very tender. Persistent injury will kill them and prevent their giving rise to new wood and bark. As a consequence, the attempt to repair the fire damage will be thwarted. The wound will never be closed, and the tree will not be able to again attain full and complete use of its normal functions.





TITLE FOR SCENE TWO

WHY REDWOODS ARE LARGE AND OLD

Redwood burl is the result of an abnormal response of the tree after a wound has been healed. Normally, the reaction, after the broken vital functions are reunited, is to overlay annual rings of growth over the healed area. Abnormally, the response is to produce, along with the regular annual rings, a quantity of buds. These are capable of growing into twigs and, in time, producing a system of branches. However, the buds remain arrested, because the top or crown buds of the tree keep drawing on the main food supply.

Given the proper stimulation, these burl buds send forth sprouts. This is exactly what happens when a piece of Redwood burl is placed in water.

Title for Scene Four

WHY REDWOODS ARE LARGE AND OLD

The root system of the Redwood appears remarkably shallow for so colossal a tree. The system performs two main functions, that of anchoring the tree firmly in the ground, and that of taking up water and mineral nutrients from the soil.

Strange as it may seem, the latter system (the feeding roots) is above the anchor roots. Note how the great number of thinner feeding roots branch and divide to hair-like size as they reach upward, and how they approach the surface so closely that the soil layer next to the litter and leaf mulch from three to four inches in depth is interwoven by them. Since the water and mineral nutrients are taken in by the sensitive root endings, the Redwood actually secures its food at the surface immediately beneath the leaf mould.

Title for Scene Five

WHY REDWOODS ARE LARGE AND OLD

Another explanation for the Redwood's great age is that the surface feeding root system appropriated the available raw foods before competing trees have a chance to do so. Just at the place where the layer of litter disintegrates and reduces to soluble compound, there the tree has concentrated its feeders.

It should be apparent that, if the leaf mould is destroyed and the surface of the soil is compacted by the excessive trampling of feet and by automobile traffic over the root area, the tree will suffer. The normal production of raw food through decomposition will be reduced in amount. The tender feeding root ends will be crushed and unable to perform their usual function. The tree will go into an early decline. Not even the unexampled vitality of the Redwood can overcome such abuse. Under man's "protection" the tree will not live as long as it does under nature's care.

DIVISION THREE

HISTORICAL SERIES

SIGNIFICANCE OF THE REDWOOD PIONEER

The Redwood Tree, together with the solitude and environment of its forests, exerted an overmastering influence on the pioneers. It molded their habits and ways, controlled their goings and comings and entered into their every-day doings. Always it asserted itself. In everything it dominated. It touched almost every fact of pioneer experience; entered into their means of gaining every hardy necessity and every rugged convenience.

From the cradle to the grave, the pioneers of the Redwood region were in touch with Redwood in one way or another. Pioneer babies were rocked in a Redwood cradle and those who came to the end of their pioneering and died were buried in a Redwood coffin. In an astonishing number of ways they used Redwood. Not only did they use it to construct durable dwellings and shelters, but they also employed it extensively in fashioning articles of common or temporary utility. Boxes and bins, bats and tanning vats, they made of Redwood. Fences and furniture, flumes and household facilities, they also made of Redwood. Posts and pencils, pails and water pipes they even made of Redwood. Redwood actually entered into their means of keeping in touch with the outside world. Their roads were cribbed with Redwood logs. Streams were bridged with Redwood timber. Many, too, were the products which could be split out of the tree and sold on a ready market at a good profit. Railroad ties and grape stakes, for instance, netted a tidy sum and afforded the means whereby the pioneer purchased such staple requirements of civilized man's existence as flour, sugar and coffee.

In fact, the vast variety of uses to which the Redwood could be put and the intimate way it entered into the pioneer cycle, conspired to produce a type both distinctive and unique. Indeed, this pioneer type has an intrinsic historical value all its own. It is not too much to say that it should rank with equal prominence among the important pioneering episodes of America. It should stand with the other well known and recognized types of pioneers who blazed the way, who performed countless deeds, some for strange and tragic ends, and who made the history of the West so colorful and so remarkable.

Aside from this claim that the Redwood pioneer type is deserving recognition in and of itself, other reasons may be advanced to further justify the making of this pictorial history. Redwood lumber has been one of the most important natural resources of California, and one of the most outstanding assets in the building of present-day civilization in Northern California. Because of this fact, Californians in the future will be interested in the very beginnings of human occupation of the Redwood region. Accordingly, an accurate pictorial record of the distinguishing characteristics of the Redwood Pioneer toghther with a portrayal of the dominant lines of influence that distinctly differentiate the period will be of salient value to California history.

There is a further reason why the Redwood Pioneer cycle should be given attention. This is based on the need for a well-rounded historical interpretation of American pioneering. The Redwood episode came at the close of that great historic movement which witnessed the advance of American settlement westward. The peculiarity of the westward movement lies in the fact that in each recurring line of the frontier, in each return to the primitive, a new cycle began. This new cycle, under the influence of a slightly different environment, a slightly altered primitive setting and changed economic and social conditions, produced a new product with characteristics all its own. This means that, there were successive recurring frontiers, the whole sweep of American frontier history cannot be told in terms of one pioneer cycle. That which occurred in the blue grass country of Kentucky differed in essentials from that which evolved in the cow country of the great plains. Both cycles made important contributions to American character. Both occupy a place in the story of westward expansion. Thus, to preserve one and to neglect the other, to study one advance, the men who grew up under its conditions and the political, economic, and social results of it, and to ignore the other, would naturally result in an imperfect record. It would permit an understanding of only part of the story. In this light, the Redwood pioneer cycle, being a distinct cycle, has national significance. It is one of the last chapters in the story of the expansion of the American people across the continent. It is essential in rounding out the proportions of the epic of winning the wilderness.

ESSENTIAL STEPS IN SPLITTING OUT MARKETABLE PRODUCTS FROM A MASSIVE REDWOOD LOG

After the Redwood pioneer discovered that the giant tree was extraordinary for its straight-splitting character, the Redwood was soon put to a startling array of uses. More than a log, it was to the Redwood pioneer what the buffalo was to the Plains Indians - the staff of life.

These drawings show each essential step developed by the pioneer in the process of working up a massive log into various marketable products. They depict the first halving of the log by means of simple, yet ingenious tools and show how boards and posts were split out of the pie slice segments. They also, picture the various methods used by the pioneers in transporting these split products out of the forest to the settlements.

The great historical value of these drawings is brought into clear relief when it is realized that there exists no available documentary evidence of this phase of pioneer history. These drawings are therefore more than a mere picturization of what is already extant. In fact, they are all the record that exists of this lost art of the Redwood pioneer. They have been made from verbal information secured from a ninety-two year old Redwood pioneer who styles himself "the last leaf on the tree". It is not too much to say, that besides preserving the detailed story of this process, the series contributes to a more complete understanding through this visual medium employed here than any printed record possibly could.

One of the numerous uses of these drawings is that of making from them lantern slides for lectures.

JUSTIFICATION FOR EMPHASIS OF MADDOCK'S CABIN

Authorities are agreed that each pioneer cycle tended to produce a standardized type. The causes that brought this uniformity are not far to seek. In the first place, the factor of isolation severed all intercourses with the civilized world and broke the bonds of custom. In the second place, the environment of the region imposed an imperious summons and forced conformity. The pioneers of the given region found themselves sharply precipitated into the simplicity of certain given primitive conditions. They had no alternative but to accept these conditions or perish. The wilderness being too strong for them, they fitted themselves to it and adjusted their needs, as has been shown, to the raw products it supplied. In making their new adjustment, they changed their habits of life and their manners. They actually modified institutions which had governed their ancestors for generations.

The requirements of the group, such as those commonly represented in the services of school, church and local government were sifted out of the design for living. Food, shelter and protection were prime requisites. In a lonely existence completely removed from former ties and associations and lighted rarely by any other human presence, immediate family needs were of primary concern. The clearing of a suitable plot of land and the erection of a cabin was one of the first steps to this end. Then followed the grinding labor of transmitting into usable form the raw products of the wilderness. The rawness of hardships, the privation and perils of the wild were the common lot of all. As a result of this, occupations tended to become practically identical and there was a striking similarity in the daily routine. In short, the circle of existence followed the same pattern for every pioneer family in the Redwood region.

Typical of the pioneering in the southern part of the Redwood belt is that supplied by the record of the Maddock family. Tom Maddock, thrown upon his own resources to make success or failure, entered the wastes of Redwood forests in the Santa Cruz Mountains. This was in the late seventies when settlement was creeping up the San Lorenzo Valley from Santa Cruz. Maddock, a young man, was already burdened with five children. Poor, with nothing but the strength and initiative of youth and the self confidence of the inexperienced, he "broke for the high timber". He wished to advance his chances and that of his children. Within the confines of the present Big Basin Redwood Park, he staked a homestead.

With characteristic pioneer ingenuity, he found the means to sustain life in the natural products of the forest. Furthermore, he fashioned from native materials not only a dwelling, but many articles and crude conveniences that made life a bit more livable. Freed from the bondage of the past, its traditions, its restraints and its artificialities, he developed new ways of doing things and a new order.

An examination into the history of another family, the Winfield Scott Rodgers family, who passed through the same cycle as the Maddock family, reveals many facts that match up with remarkable similarity. Both were cast in the same mold. In the beginning there was the same subordination to the same environment, the same quickness to find expediences to satisfy wants, the same rugged coarseness of life and the same sort of unavoidable privation. The adaptation to like primitive conditions, which were alike forced on both families, resulted in a parallel behaviorism and in the development of traits strikingly analegous. In fine, either family may be said to epitomize the pioneering of the region.

Unfortunately, the Rodgers cabin, as well as all the other pioneer cabins, have been destroyed by fire. Only one cabin has escaped the elimination which fire has brought to its other contemporaries. The Maddock

Cabin is, therefore, the last remaining phsycal evidence of the Park's historic Redwood pioneer background.

Fortunately, the Maddock Cabin stands today in an almost perfect state of preservation. Because the cabin represents an historic monument in place and historical events can be sensed more fully in an atmosphere of their physical background and associations and because Tom Maddock's pioneering is typical for the region, the cabin and the human events associated with it have been selected for portrayal.

HISTORICAL SKETCH OF MADDOCK FAMILY

The history of one Tom Maddock, an Irish immigrant who "squatted" in the Redwood tract of the Santa Cruz mountains in the late seventies, yields importent information about the history, habits and character of the California Redwood Pioneer. For Tom Maddock's history is typical of those who were the first to enter the Redwood wilderness wastes and establish a home.

Maddock's story reveals how a penniless immigrant learned the craft of the woodsman; how he built, almost single-handed, a cabin in the wilderness and then wrested from that wilderness a livelihood with nothing but an axe and his own determination to aid him. The cabin, which he built of boards split from a single tree, still stands among the Big Basin Redwoods.

Like many another, Tom Maddock was lured to California by promotion literature. It was the literature of Tom Scott, promoter of the ill-fated Texas & Pacific Railroad. The road was to run from Marshall, Texas, to San Francisco via San Diego. Its route, according to the literature Maddock read, was through a land where nature was so lavish with her gifts that toil was virtually unknown. So when Tom Maddock married Alice Sinnott in 1871, they sailed from Ireland the same day for the land where breakfasts were to be plucked from the nearby trees and lush cattle would graze up to their doors waiting to be claimed and marketed.

By the time the young couple had reached San Rafael in Marin County their dreams were gone, and so was their money. Maddock got work as a milker. He milked cows five years and then invested his savings in six horses. In August, Maddock moved his wife and three children, who had been born in San Rafael, and his six horses, to Boulder Creek. Many teamsters were earning a living there by hauling sawn lumber from the hills to market or the port of Santa Cruz. But, almost the day Maddock arrived there, a flume for floating lumber was put into operation and the teamsters were thrown out of work. To keep his horses from eating up his remaining savings, Maddock drove them to Sky Meadow, now part of the Redwood Park, to pasture them until work for teamsters was available. When he returned for them the following Spring he found only their skeletons. They had been eaten by Grizzly bears.

Unable to obtain steady work at Boulder Creek, Maddock returned to the Big Basin in the Summer of 1877 and built a squatter's cabin. The land on which he squatted belonged to none other than Tom Scott, whose literature had lured him to California. For, in lieu of land previously claimed by others along the right-of-way of his projected Texas to California railroad, Scott had filed claim to a vast forested tract extending northward from the watershed of the San Lorenzo. So Scott's dream that had tricked Maddock so cruelly now yielded him a livelihood.

For three Summers he harvested from Scott's forest Tan Oak bark for the tanneries of the Santa Clara Valley, a thriving industry there at the time. He learned to add to his income by working up Scott's Redwoods into "split stuff" for Redwood ties, fence, posts, pickets, staves for tanning vats and other purposes.

Also, he harvested the Madrone, from which gunpowder was made for the quartz gold mines in the Mother Lode Country. Eventually, he benefited still more from Scott's promotions. For, in 1882, it was clear to the Federal Government that Scott was not going to build a railroad, His holdings were ordered forfeited. When they were, Tom Maddock and other squatters filed claims to the land. Maddock obtained 160 acres of virgin forest for the filing fee, $7.50.

In the Spring of 1883 Maddock built the cabin that remains today as a monument to the Redwood pioneers. Aided by his son, John, then 11, Maddock built the structure from a single, well-splitting tree. It was John Maddock, who personally furnished the Project Technician and Art Director, R. S. Ellsworth, with much of the information about the cabin's construction and of the ensuing years in which the family battled the forces of nature in the Redwood forest.

It is a story unduplicated in our present mechanized age. For the father was forced, practically single-handed, to fell trees on the site and grub out the stumps and roots without the aid of machinery or dynamite, horses or oxen. Then he felled a selected Redwood nearby and hewed from it 24-foot foundation beams with a common axe. They were shifted into place by brawn alone. Every timber of the framework, every board, even the shakes for the roof, were split by hand from the one tree with the simplest of tools.

With no money to buy bricks, and because local sandstone was of inferior quality, Maddock determined to use mud for his fireplace and chimney. He built a double-walled framework, much like the forms used today in cement construction, and filled the space between the walls with mud. Then, by burning out the inside form, he baked the mud. The fireplace and chimney held their positions. But when it rained, his children recall, a muddy, chocolate-colored trickle dripped into the boiling pot over the fireplace. During the dry season loosened bits of mud tumbled down into the cooking food. But the chimney is a tribute to Maddock's ingenuity.

Construction of the home was only one of his difficulties. When he planted an orchard an vegetable garden, thousands of squirrels and rabbits swarmed into the clearing to display their appreciation for a change of diet. When they tried to keep chickens, they were eaten by foxes, weasels or skunks. Because of the Grizzlies, he never tried to keep a cow. Maddock often was required to work some distance from his home. Then it fell to the boy, John, to keep the larder stocked.

Because powder and lead were costly, John could not afford to shoot rabbits or squirrels. When he hunted deer or other large game he seldom used real lead bullets. For John found that bullets from leadfoil were almost as effective as lead. Thus, chewing tobacco wrappings discarded by lumberman became ammunition for his antique muzzle-loader. But collection of leadfoil took time, so John used his ammunition sparingly. When he shot a deer he lined it up with a tree. Then if the leadfoil bullet passed through the deer , he could retrieve it from the tree with his pocket knife.

John and his sisters added to the food supply by spearing fish and picking huckleberries. They helped their mother prepare fish and venison for Winter. They dried it, smoked or pickled it in every conceivable way to give their diet a semblance of variety. But on their simple diet they grew strong and healthy.

The modern woman will marvel at the fortitued of Mrs. Maddock. While her husband had contacts with the settlements, whe was alone with her children in the forest. She must have been aware constantly that each time her children left the home they faced the menace of prowling Grizzlies. Sometimes the bears menaced her véry doorway. Twice when her husband was away she faced the ordeal of childbirth alone with her children. Yet, her surviving children recall, she never seemed discouraged or depressed. One of her happiest days, they remember, was when, in later years, a trail was cut through the Redwood forest and semi-weekly horseback trips began from Boulder Creek to Pescadero. The horseback trail ran past the Maddock Cabin and parties often stopped for meals which Mrs. Maddock served. Then, the isolation, so seldom lighted by another human being's presence, was broken and Mrs Maddock was able to enjoy the society of other women again.

Of course, this meant an end to the loneliness which so marked the lives of the Maddock family. It also meant that the frontier with its unique conditions had passed and that the real pioneering was over. Semi-weekly contact with the settlement of Boulder Creek enabled potatoes, beef and pork and other foods to be packed in and permitted the introduction of the "luxuries" of Civilization.

PASTEL PORTRAIT

THOMAS MADDOCK

1849-1920

CASE EIGHT

BUILDING A REDWOOD CABIN

ORIGINAL PROSPECTUS

BUILDING A REDWOOD CABIN

CONSTRUCTION AND ERECTION OF FOUNDATION AND FRAME

Fifteen scenes in water color showing:

1. Successive and essential steps in clearing the cabin site; chopping of trees, the grubbing out and removal of brush growing on the site of the cabin's location. Emphasis given to grueling labor of digging outtree stumps without use of dynamite or machinery and with but the force of main strength and awkwardness.

2. Hand labor and technique in hewing out massive foundation sills and ponderous underpinning.

3. Process of splitting out joists and heavy planking for flooring. Method of smoothing floor boards with crude draw knife.

4. Resourcefulness stressed in original construction of dirt and stick fireplace and chimney. Bricks, were of course, out of the question, and the creek bed supplied only a few stones, and these of very poor quality. Hence, the pioneer had no alternative but to evolve a combination of dirt and sticks which would do service. The fact that this oddment fulfilled the design of its creator and stood for some fifty years is testimony in itself of its historic worth. During the long dry season bits of the drying dirt sifted down and into the food. During the rainy season, some of the dirt loosened and also dropped into the cooking food. Other than these "defects" the fireplace and chimney rendered complete satisfaction.

CENTRAL LEGEND

BUILDING A REDWOOD CABIN

The Redwood Pioneer built his home in the wilderness with the aid of few and simple tools and without the assistance of either draft animals or machinery. Every timber was worked up by hand and placed in position by brawn alone. In some cases, stone was lacking and bricks and cement were beyond his purse. Pioneer resourcefulness, in such situations, evolved a mud and stick fireplace.

The accompanying pictures show clearing the site, construction of cabin foundation and the ingenious fireplace.

TITLES FOR EACH SCENE

BUILDING A REDWOOD CABIN

1. Clearing cabin site.
2. Felling Redwood for foundation beams.
3. Grubbing out stumps and roots with hand labor.
4. Hewing out timbers for foundation sills.
5. Placing foundation piling.
6. Raising massive 24-foot foundation sills on pilings.
7. Splitting floor joists with hand-made tools.
8. Smoothing and laying heavy floor planking.
9. Constructing crib for hearthstone.
10. Carrying mud and rocks for fireplace hearth.
11. Building outside base of fireplace.
12. Filling double walled form with mud.
13. Completing fireplace box form.
14. Beginning construction of stick and mud chimney.
15. Facing chimney with mud.

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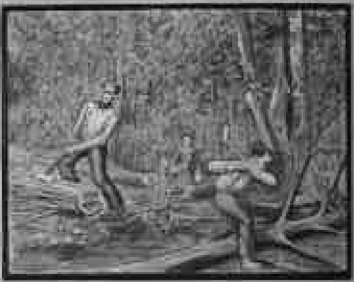
FELLING REDWOOD FOR FOUNDATION BEAM

GRUBBING OUT STUMPS AND ROOTS WITH HAND LABOR



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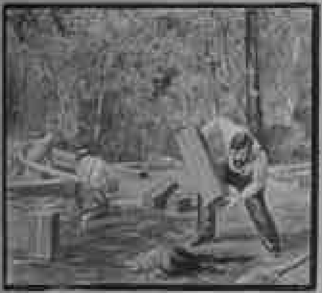

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BUILDING A REDWOOD CABIN

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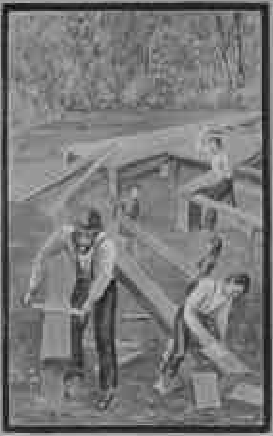

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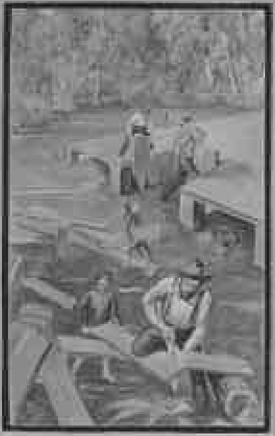

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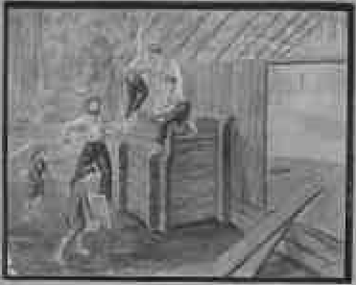

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Drawings showing details in Building a Pioneer Redwood Cabin not depicted in the case display. These drawings were originally used by the artists as preparatory studies and preliminary sketches.

One of their numerous future uses is that of making from them suitable lantern slides for lectures on the Redwood Pioneer.

CASE NINE

SPLITTING OUT BOARDS AND SHAKES

ORIGINAL PROSPECTUS

SPLITTING OUT BOARDS AND SHAKES

MAKING SPLIT BOARDS AND ROOF SHAKES

Fifteen scenes in water color showing:

Successive steps in the technique and method of working up a massive log. Though the Redwood is outstanding for its excellent splitting qualities andsplits with an eveness that excites the admiration of mechanics, there were certain specific ways of driving the wedges so as to take advantage of the grain of the wood.

The log was first halved with steel wedges and sledge. Then the half was quartered. The quartered pie slice in turn was split in half. This process of halving each pie slice of the log was followed until a "cant" of the desired size was secured. Out of the "cant" was worked a "bolt" and from the latter the boards were split with the use of a free and wooden maul. It was necessary to restore some missing boards during the reconstruction of the cabin. In all California there can not now be found a woodsman who possess the skill to turn out the almost perfectly precise and uniform boards with which the Cabin was originally built. This means that the craftsmanship exhibited has departed with the pioneer period.

TITLE FOR SCENE

SPLITTING OUT BOARDS AND SHAKES

CENTER

The Redwood pioneer discovered that some Redwood trees have excellent splitting qualities. Urgent necessity forced him to develop the art of splitting out timber and boards by hand. For this purpose he perfected special tools which enabled him to handle the huge logs.

The accompanying pictures show the successive steps in working up a massive Redwood log into boards for a pioneer cabin.

TITLES FOR EACH SCENE

SPLITTING OUT BOARDS AND SHAKES

1. Felling a straight-splitting Redwood selected after careful tests.

2. Cross-cutting log into sections of desired length.

3. Driving wedges preparatory to making first split.

4. Halving the log by force of wedges.

5. Quartering the log.

6. Dividing the quarter into smaller pie slices.

7. Arriving at desired size of pie slices by repeated halving.

8. Removing top angle from pie slice.

9. Splitting plank from pie slice.

10. Dividing plank with wooden glut and mallet.

11. Sub-dividing timber into workable form.

12. Starting to split board from timber with froe and wooden maul.

13. Completing the board.

14. Nailing boards in place for cabin walls.

15. Cabin roof shakes being split from smaller timbers.

SPLITTING OUT BOARDS AND SHAKES

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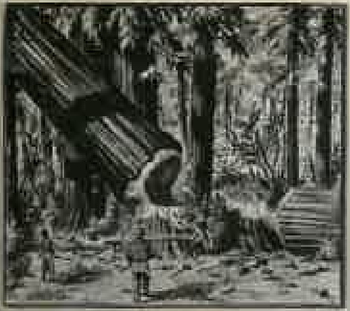

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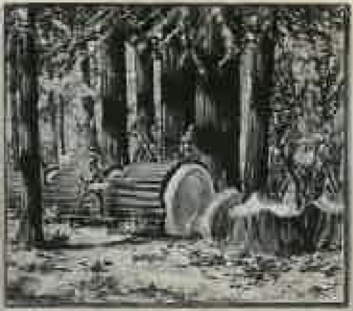
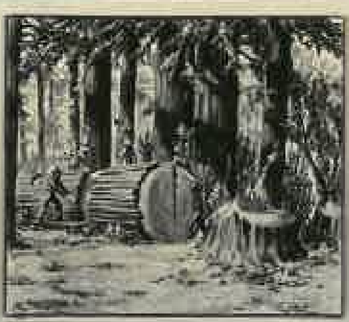
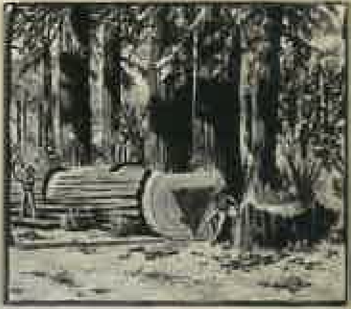


CROSS-CUTTING LOG INTO SECTION OF DESIRED LENGTH



DRIVING WEDGES PREPARATORY TO MAKING FIRST SPLIT



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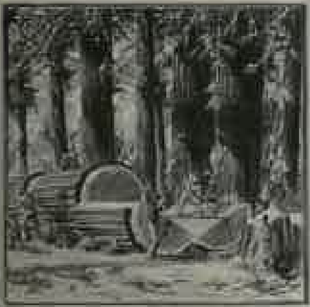

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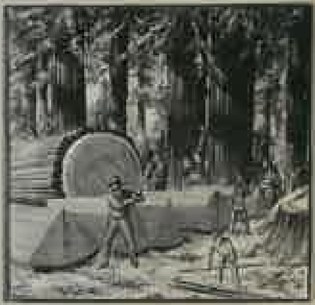

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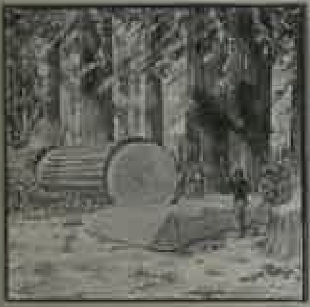

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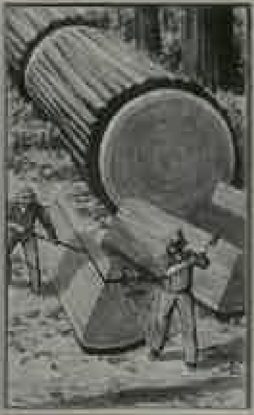

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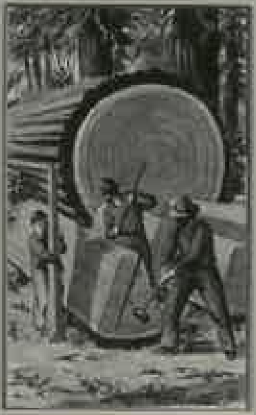

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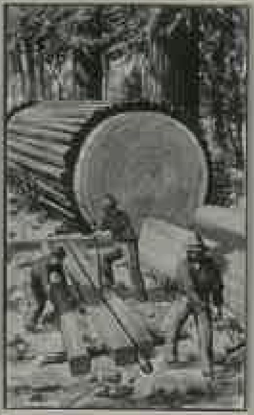

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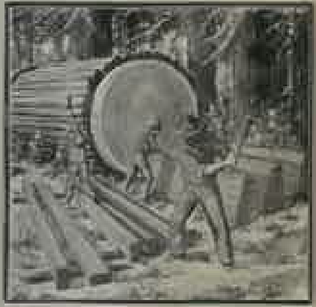

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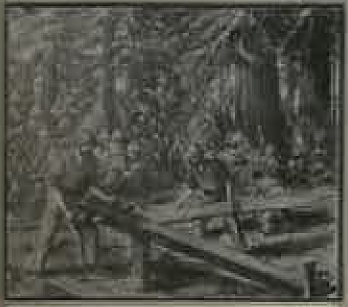

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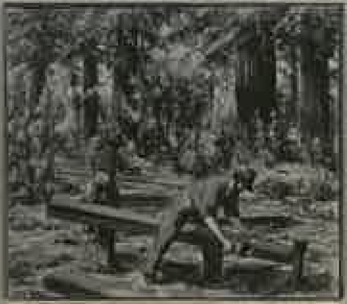

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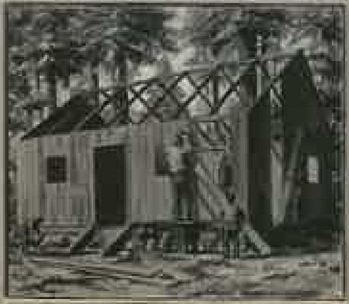

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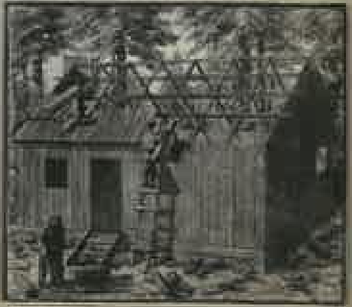

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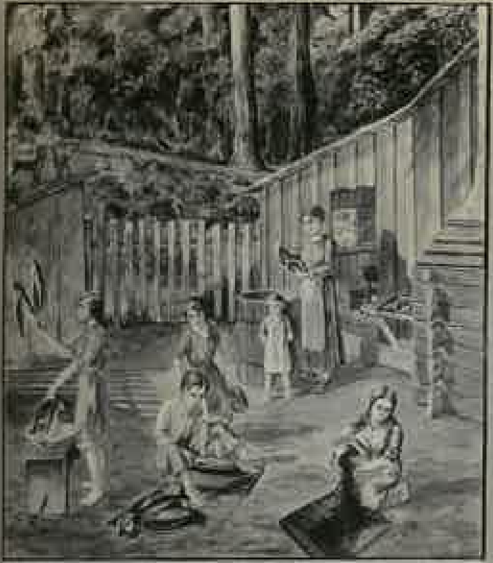
CASE TEN

PIONEER FAMILY LIFE

PIONEER FAMILY LIFE

IN THE DEPTHS OF THE REDWOOD FOREST REMOTE FROM CIVILIZATION, PIONEER FAMILY LIFE WAS REDUCED TO A SIMPLE AND ALMOST PRIMITIVE SCALE. NATURE WAS AT FIRST TOO STRONG AND THE REDWOOD PIONEER HAD TO ACCEPT CONDITIONS OR PERISH. RODENTS DEVOURED THE VEGETABLES; RABBITS AND DEER DESTROYED THE NEWLY PLANTED GRAPE VINES AND FRUIT TREES; WOLVES MADE OFF WITH [illegible] AND [illegible]-KILLING GRIZZLIES PREVENTED THE KEEPING OF A COW OR HORSE.

IN ORDER TO LIVE UNDER THESE TRYING CONDITIONS, THE PIONEER CHANGED HIS DIET. WITH THE EXCEPTION OF SALT, SUGAR AND FLOUR, WHICH WERE PACKED IN, THE WOODS SUPPLIED ALL OTHER FOODS. DEER MEAT, TROUT AND HUCKLEBERRIES, BECAUSE OF THEIR ABUNDANCE, BECAME THE STAPLE FOODS



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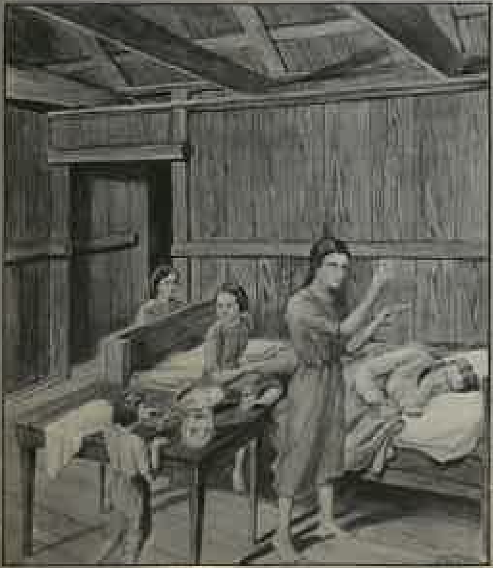

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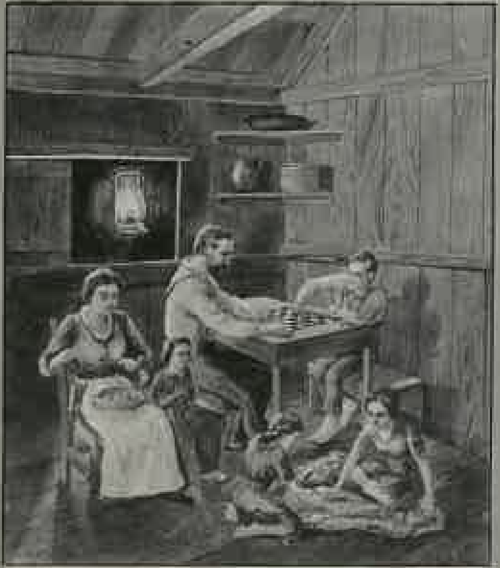

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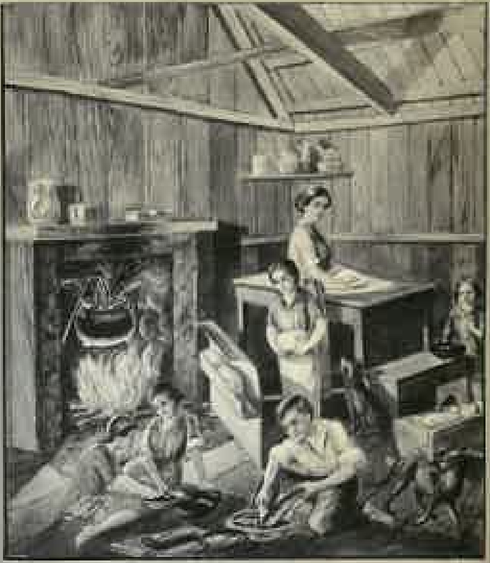

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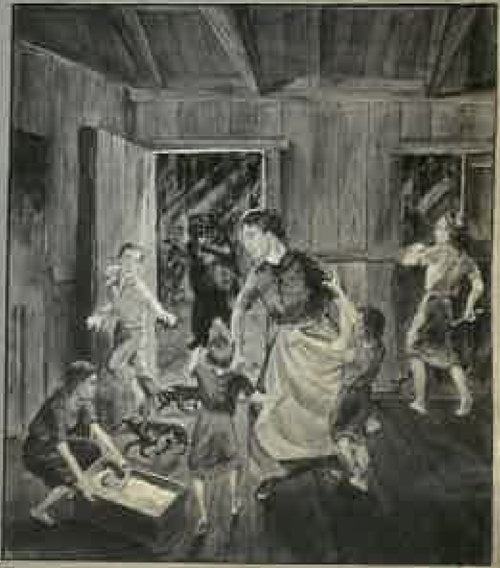

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ORIGINAL PROSPECTUS

PIONEER FAMILY LIFE

"SUBSISTENCE AND RECREATION."

Six scenes in water color showing:

1. Food preparation. Out-of-doors.

   Scene showing chimney side of Cabin with clearing fenced with Redwood pickets. A newly planted orchard of fruit trees and grape vines being devoured by deer and rabbits.
   The boy John, age twelve, splitting large steelhead trout preparatory to drying. Oldest girl, Alice, age 10, hanging fish on line. Huckleberries being placed on Redwood trays.

2. Food preparation and cooking before the mud fireplace. Living room scene.
   Mother and one girl busily engaged in unique pioneer process of baking bread.
   John cleaning trout.
   Two girls, Josephine, age 8, and Fannie, 6, picking over huckleberries.
   Baby, Thomas, only a few months old, in Redwood cradle. The youngest girl, Agnes, age 4, learning how to mix food in a Redwood bowl.

3. Work day out of doors on bench beside mud chimney.
   Mother washing in homemade Redwood tub.
   Alice and Josephine, the two older girls, carry hot water from the fireplace. Fannie carries wood.
   The youngest girl, Agnes, amusing the baby, Thomas.

4. Recreation. An evening scene in the cabin living room.
   Mother sewing.
   Two girls, Alice and Josephine making a patchwork quilt, while Fannie looks on.
   A game of checkers being played by the Father and John.

5. The birth of the sixth child, Thomas.
   Bedroom scene showing the Mother attended only by her children, the Father being absent.
   In so distant a part of the wilderness, medical

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CENTRAL LEGEND

PIONEER FAMILY LIFE

In the depths of the Redwood forest remote from civilization, pioneer family life was reduced to a simple and almost primitive scale. Nature was at first too strong and the Redwood pioneer had to accept conditions or perish. Rodents devoured the vegetables; rabbits and deer destroyed the newly planted grape vines and fruit trees; foxes made off with the chickens and stock-killing grizzlies prevented the keeping of a cow or horse.

In order to live under these trying conditions, the pioneer changed his diet. With the exception of salt, sugar and flour, which were packed in, the woods supplied all other foods. Deer meat, trout and huckleberries, because of their abundance, became the staple foods.

PIONEER FAMILY LIFE

FOOD PREPARATION

In order to avoid an otherwise monotonous diet, the three staple foods were variously prepared. The picture shows the mother engaged in pickling deer meat in a home-made Redwood tub. The boy and girl are busily preparing steelhead trout for winter use, while another girl is placing huckleberries on a drying tray.

TITLE FOR SCENE

PIONEER FAMILY LIFE

FOOD PREPARATION: INDOORS

Pioneer ingenuity and resourcefulness is illustrated here in the manner of baking bread. A piece of tin is shown holding the dough which was placed in front of the fireplace. From this location the bread was baked by refracted heat. The two girls are culling huckleberries and removing the bugs.

TITLE FOR SCENE

PIONEER FAMILY LIFE

WASH DAY

The rawness of hardship and back-breaking toil were the common lot of all. Mother and children performed the household duties and suffered continual drudgery. Wash day was just another necessary labor. Water had to be carried some distance from the stream. Note the home made Redwood buckets and wash tub.

TITLE FOR SCENE

PIONEER FAMILY LIFE

RECREATION

Just as all members of the family shared the burden of toil, in like manner, everyone participated in relaxation. Toys and games were prohibitive in cost. The members of the family amused themselves with self-made articles like the checkerboard shown here. Most frequently pleasure was found in the creation of things of foremost utility such as the quilt upon which the girls are working.

TITLE FOR SCENE

PIONEER FAMILY LIFE

HARDSHIP AND SUFFERING

Because of circumstances, the father was often obliged to work at a distance from the family. The mother, being alone, had no contact with the outside world, and endured hardships that would appal the modern woman. In some cases, the ordeal of childbirth was faced and borne alone with no human soul to attend the suffering mother, save her children.

TITLE FOR SCENE

PIONEER FAMILY LIFE

DANGER

Of the perils of the wild to be braved, danger of attack from grizzlies was the most menacing. These savage brutes were the lords of the forest and defended their domain against all intruders. A scare which the Maddock family received from a grizzly that threatened to smash into the cabin, is depicted here.

CASE ELEVEN

PIONEER USE OF TAN OAK

ORIGINAL PROSPECTUS

PIONEER USE OF TAN OAK

TAN BARK OPERATIONS

Nine scenes in water color and one botanical chart showing:

1. Removal of bark from base of large virgin Tan Oak. First step, girdling four foot section. Spring of the year.

2. Peeling section of bark at base preparatory to felling.

3. Felling tree after base section has been removed.

4. Rinding and splitting second section of bark from felled oak. Rinding of third section.

5. Peeling second section and splitting third segment. Exposing removed sections to drying action of the sun.

6. Life sized painting of foliage of Tan Oak, acorn and catkin.

7. Culching bark and loading on unique horse-drawn "drag". Employment of Plains Indian method of transportation by use of drag wade of two poles enabled bark to be taken out of forest without the necessity of making trails.

8. Unloading drag sled. Piling bark at section of the woods tapped by a recently made road.

9. Loading bark on specially devised wagon for transportation of bark to tannery.

10. Tanning leather in Redwood vats. Process involving use of Tan Oak bark.

The pioneers who invaded the Redwood region lacked the money and special tools needed in Redwood lumbering. Hence, the first trees destroyed were those from which a tribute could be extracted with simple and common tools, such as the axe and saw.

During the earliest pioneer period the Tan Oak ranked as a revenue yielding tree and the removal of bark for use in the process of tanning leather proved the best means of liflihood. The operations shown in this depiction are of the earlier period previous to the time when pack mules were used.

CENTRAL LEGEND

PIONEER TAN OAK OPERATIONS

Lacking money and equipment to lumber Redwoods, the Pioneer was forced to turn first to other trees in the Forest for a livelihood. One of the earliest trees he exploited was the Tan Oak because the parts of this tree which had commercial value could be obtained with the use of simple and common tools.

The Bark of the Tan Oak Tree was in demand for the Tannin it contained. Tannin was used in curing hides for leather. The steps involved in harvesting the bark are shown here.

TITLES FOR SCENES

PIONEER TAN OAK OPERATIONS

1. Girdling the first four-foot section of bark at the base of the tree.
2. Peeling was carried on in spring when the bark was easily separated from the tree.
3. Felling the tree after removal of the valuable base bark.
4. Rinding and Peeling bark from the fallen trunk in four foot sections.
5. Stripped from the trunk, the bark is left to dry through the summer.
6. By Fall, the bark is easily gathered, having dried and coiled. The wood of trunk and branches is left to decay.
7. Dragging bark from Forest on horse-drawn drag consisting principally of two poles.
8. Loading bark from cord-size piles to wagon for transportation to Tannery.
9. Boiling bark to extract tannin in manufacture of hides into leather.

[illegible]

[illegible]

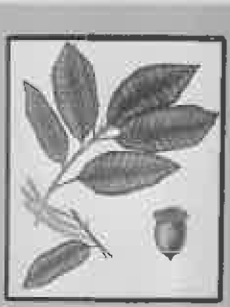
[illegible]

RINGING AND PEELING BARK FROM [illegible] FOOT SECTIONS.

[illegible]

[illegible]

[illegible]


AN OAK
PUS DENSIFLORA

[illegible]

[illegible]

[illegible]

[illegible]

PIONEER USE OF TAN OAK

LANTERN SLIDE SERIES

Through graphic presentation the following fourteen drawings make a significant contribution towards the preservation of knowledge of the technique and wood craft involved in Tan Bark operations. Each successive step is shown in the drawings, from the taking of the first section of bark from the base of the Tan Oak to the delivery of the bark to the tannery.

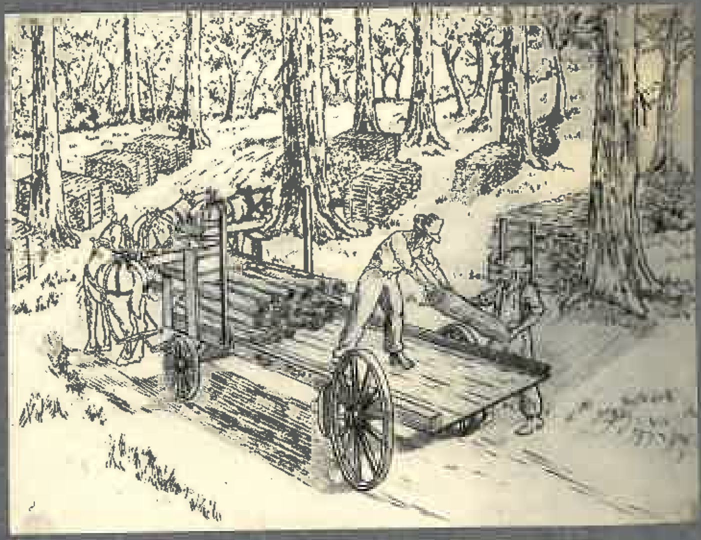
The importance of this series can be realized when it is known that this process was the means of livlihood for the first wave of pioneer that entered the Redwood fastness. These first comers had not mastered the technique of working up marketable products from the huge Redwoods. They turned first to the smaller trees, from which a man with a large, hungry family and no money, could make a living with only simple tools, like axe and saw.

Knowledge of this important early pioneer activity has died out with the passing of the pioneers who engaged in these operations and with the development of methods that lend themselves to larger scale operations. Only one man is known now alive who had a part in these early activities. He is now in his ninety-second year. He has supplied the information for the drawings and actually scrutinized them for error to be sure that they faithfully portray the operations of this early period.

The first Tan Bark operators were distinguished from the later ones chiefly in two ways. In the first place, the original pioneers engaging in the business were independent and worked for themselves. They were aided mostly by members of their families and occasionally by other pioneers. Later operations were carried on by gangs of hired laborers and were more complex in character.

In the second place, in the early operations, the bark was removed from trees growing in government land. These pioneers having considerable territory to exploit selected the best areas and harvested the very finest trees found in the forest. Because they operated over a relatively large area of country, they developed a means of transportation which enabled them to move through the forest without the labor of cutting a trail. They evolved a vehicle which could transport bark over rough, brushy country without breaking or spilling. It consisted of a drag made of two wooden poles pulled by one horse. The two poles were fastened to either side of the horse, by specially made connections in order to achieve the desired flexible rig.

Due to the uniqueness of this specialized device, the drawings feature every important detail. They depict the several different ways that the drag was loaded and show how the load was dragged to locations that could be reached by the picturesque buckboards, equipped with high racks and huge brakes.



TANNERY

CASE TWELVE

PIONEER USE OF MADROÑO

ORIGINAL PROSPECTUS

PIONEER USE OF MADRONO

Eight scenes in water color and one botanical water color showing:

1. Chopping down of virgin Madrono trees, process of stripping off bark, cross-cutting into standard lengths and splitting into wedges.
2. Transportation out of the trackless forests with specially devised oak sleds.
3. Process of carbonizing wood preparatory to its use as an essential ingredient in blasting powder.

In Madrone operations only the wood of the tree was of value, the bark was discarded. In the Tan Bark operations the bark was useful, but the wood was left to decay in the forest where the tree had fallen. Obviously, since different parts of the tree were used in the two operations, each operation developed a technique distinctive within its own field. For example, in the transportation of Tan Bark, the bark being light in weight, a device could be employed which would not be of service in hauling heavier material. Hence, in Tan Bark transportation the interesting Plains Indian pole-drag or travois was used. Madrone wood, on the other hand, was too weighty to be transported with the travois, so special sleds were devised to haul over broken brush and tree covered country.

Later, in the nineties the pack mule was introduced. This depiction shown here is of the earlier process.

FELLING A VIRGIN STAND OF MADRONE

[illegible]

[illegible]

PIONEER MADRONE OPERATIONS

WHEN THE MINERS HAD SKIMMED THE SIERRA OF ITS FREE GOLD, IT WAS NECESSARY TO LIBERATE THE PRECIOUS METAL FROM QUARTZ ROCK. FOR THIS OPERATION, THEY NEEDED BLASTING POWDER IN LARGE QUANTITIES. TRANSPORTING THE POWDER FROM THE EASTERN STATES WAS COSTLY, SO A LOCAL CALIFORNIA POWDER WAS DEVELOPED.

THE REDWOOD PIONEERS FOUND AN IMPORTANT SOURCE OF LIVELIHOOD IN SUPPLYING THE POWDER MILLS WITH MADRONE WOOD. THIS WOOD WAS REDUCED TO CHARCOAL AND IN THIS FORM SERVED AS THE ESSENTIAL BASE IN THE MANUFACTURE OF BLASTING POWDER. THE MADRONE CHARCOAL SUPPLIED THE INTENSE HEAT NEEDED FOR THE COMBUSTION OF THE EXPLOSIVE INGREDIENTS.

SPLITTING LOGS INTO DESIRED SECTIONS WITH STEEL WEDGES.

MADRONE
[illegible]

[illegible]

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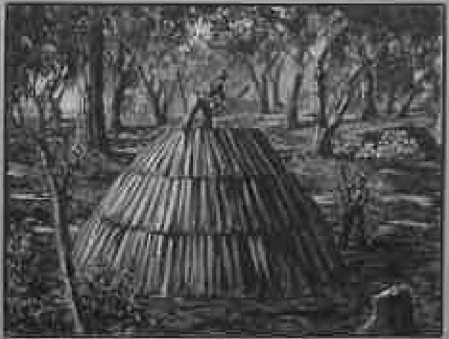

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PIONEER MADRONE OPERATIONS

When the miners had skimmed the Sierra of its free gold, it was necessary to liberate the precious metal from quartz rock. For this operation, they needed blasting powder in large quantities. Transporting the powder from the Eastern States was costly, so a local California powder was developed.

The Redwood Pioneers found an important source of livlihood in supplying the powder mills with Madrone wood. This wood was redused to charcoal and in this form served as the essential base in the manufacture of blasting powder. The Madrone charcoal supplied the intense heat needed for the combustion of the explosive ingredients.

TITLE FOR SCENE

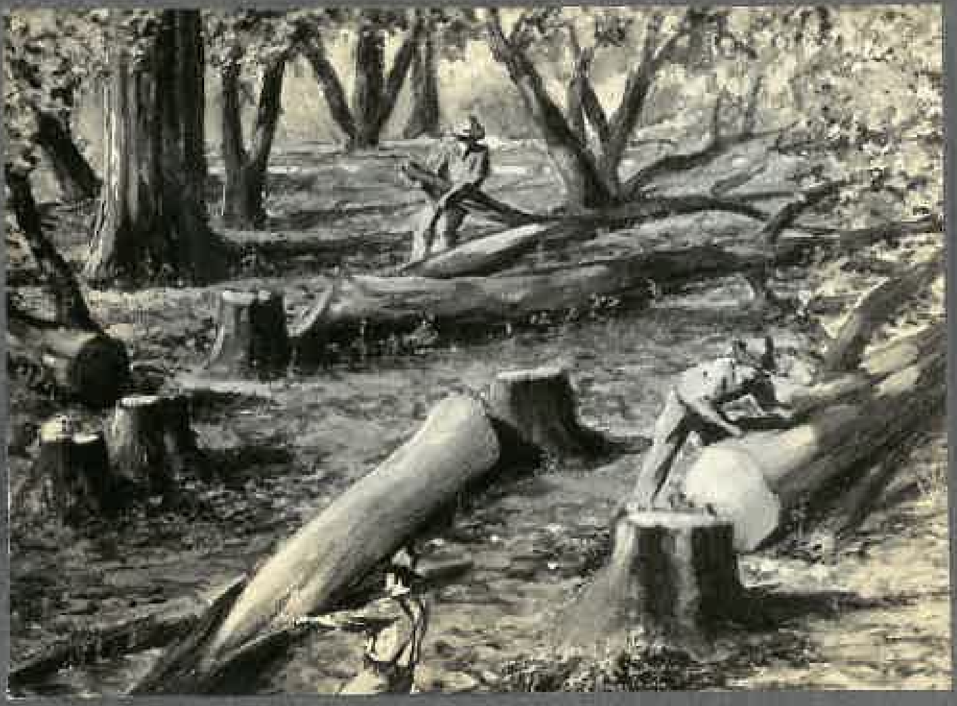
PIONEER MADRONE OPERATIONS

1. Felling a virgin stand of Madrone

TITLE FOR SCENE

PIONEER MADRONE OPERATIONS

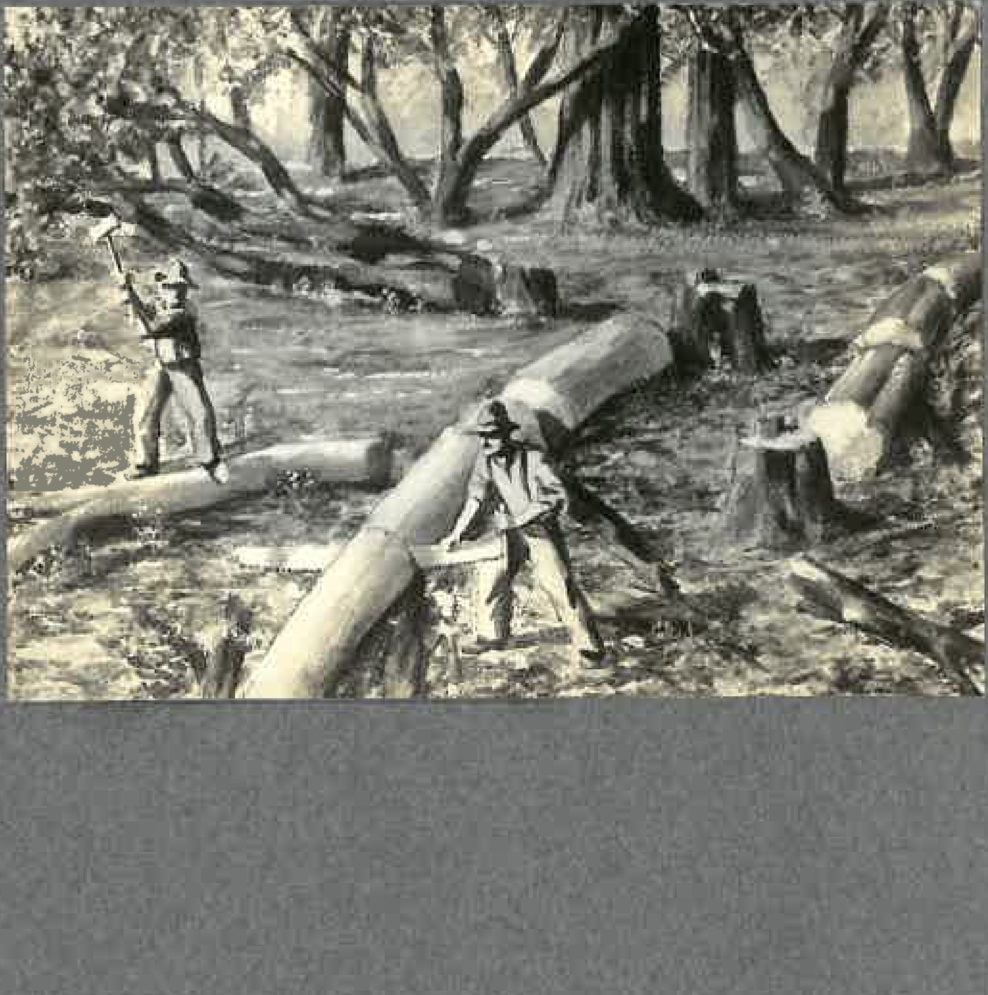
2. Stripping thin bark from fallen trees.



TITLE FOR SCENE

PIONEER MADRONE OPERATIONS

3. Cutting into four foot logs.



TITLE FOR SCENE

PIONEER MADRONE OPERATIONS

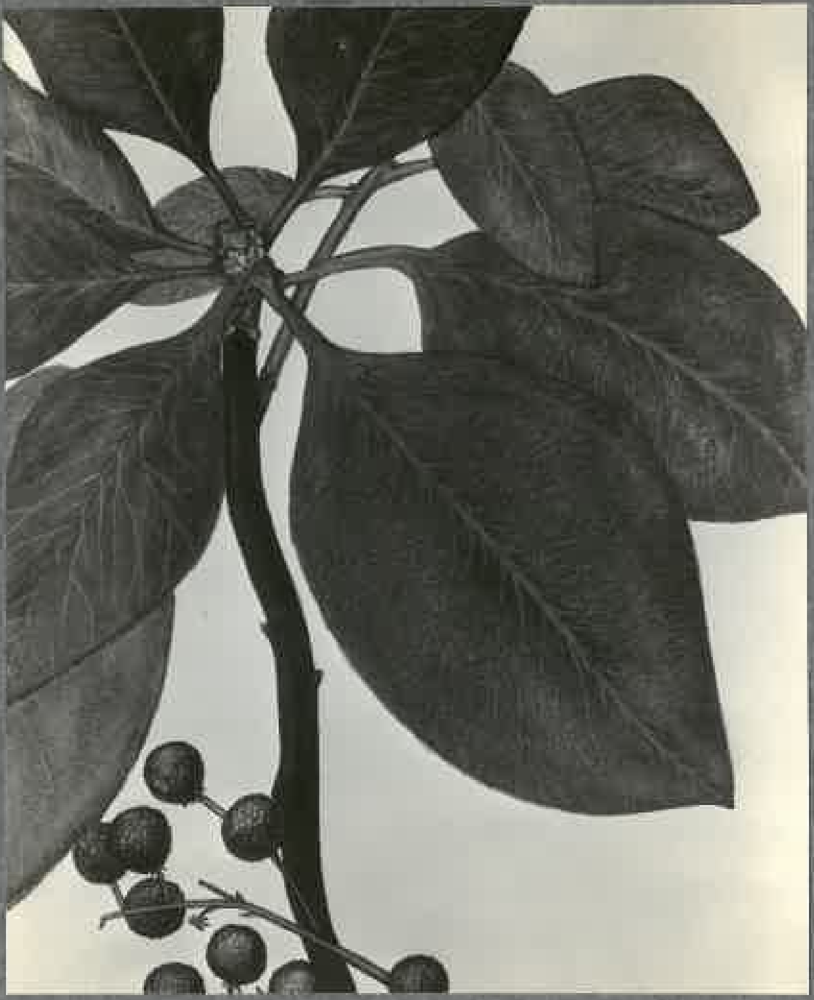
4. Splitting logs into desired sections
   with steel wedges.

TITLE FOR SCENE

PIONEER MADRONE OPERATIONS

5. Madrone.

Foliage and blossom.



MADRONO

ARBUTUS MENZIESII

TITLE FOR SCENE

PIONEER MADRONE OPERATIONS

6. Loading wood on specially devised drag sled.

TITLE FOR SCENE

PIONEER MADRONE OPERATIONS

7. Operations in transporting wood out of forest.

TITLE FOR SCENE

PIONEER MADRONE OPERATIONS

8. Preparing to reduce wood to charcoal by stacking in a cone-shaped pile.

TITLE FOR SCENE

PIONEER MADRONE OPERATIONS

9. Setting off a blast in a quartz mine.

PIONEER USE OF MADRONO

Details not shown in water color series are depicted here. Especially of historical value is the drawing of the massive oak wood sled sufficiently sturdy to permit the hauling of the heavy Madrone wood over rough terrain.

CASE THIRTEEN

EARLY LUMBERING OPERATIONS

ORIGINAL PROSPECTUS

EARLY LUMBERING OPERATIONS

BLOOM'S MILL: BIG BASIN REDWOOD PARK

Eleven scenes in water color showing:

1. Axe cut or under cut made in felling.
2. Reversed view of same scene showing back cut or saw cut being made.
3. Felling the tree in direction of the under cut by means of wedges.
4. Peeling bark from felled Redwood preparatory to burning.
5. Appearance of scene as fire devours slash and bark.
6. Cross cutting logs into desired length.
7. Bucking logs and preparing to haul a section to skidway with oxen.
8. Hauling a train of logs along main skidway to mill pond.
9. Mill pond of Bloom's Mill.
10. Interior Bloom's Mill. Use of circular saws mounted one above the other in sawing large Redwoods.
11. General view of layout of Bloom's Mill.

Historic scenes of lumbering operations at Bloom's Mill showing the essential details of cutting and milling. Restorations based on photographs and documents of rare historic value and done under supervision of the late Irving T. Bloom, the original operator of the mill.

Purpose: To preserve a visual record of a vanished American scene once typical in the Redwoods. To show operations of the single mill owners before the days of the donkey engine and improvements that ushered in the period of large scale operations.

EARLY LUMBERING OPERATIONS

BLOOM'S MILL

CENTRAL LEGEND

Ruthless exploitation by the lumber interests at the turn of the century threatened all the Redwoods of California with extinction. The halting of operations of Bloom's Mill at the very portals of the Big Basin was an event of great significance.

These scenes are of historic value. To conservationists they suggest the fate of the Big Basin if the movement to save the trees had failed.

The pictures show operations with oxen and crude equipment used before the days of modern machinery They illustrate how special tools and methods were developed to handle the biggest trees ever lumbered by man up to that time and indicate the courageous nature of the Redwood lumberman.

EARLY LUMBERING OPERATIONS

BLOOM'S MILL

TITLES FOR SCENES

1. Chopping the under cut preparatory to felling
2. Sawing the back cut on the opposite side.
3. Felling the tree by means of wedges.
4. Peeling bark from fallen trunks.
5. Burning bark and slash to clear terrain for logging.
6. Cross-cutting charred trunks into logs of desired length.
7. Hauling logs to skidway with team of oxen.
8. Dragging logs down main skidway to mill.
9. Raising logs from pond into mill.
10. General view of Bloom's Mill.
11. Sawing with twin circular saws specially mounted to handle huge logs.

[illegible]

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[illegible]

[illegible]

[illegible] MILL

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CASE FOURTEEN

SAVING THE REDWOODS

THE ORIGINAL SEMPERVIRENS CLUB

IN MAY, 1900, THIS GROUP OF NINE PERSONS EXPLORED THE BIG BASIN. "AS WE EMERGED INTO THE OPENING BEFORE THIS TREE," WROTE ONE OF THEM, "I NOTICED THE MEMBERS OF OUR PARTY ALL LOOKING AT THIS GIANT WITH OPEN MOUTHS, AND SUDDENLY I BECAME AWARE OF BEING IN THE SAME CONDITION!" AS THE PARTY FURTHER EXPLORED, THEIR AWE INCREASED. THE BIG BASIN WAS THEN AN UNTRAMPLED WILDERNESS ACCESSIBLE ONLY BY TRAIL AND EXHIBITED MUCH OF ITS ORIGINAL PRISTINE CONDITION.

THE SIZE AND GRANDEUR OF THE TOWERING REDWOODS, THE BEAUTY AND FRESHNESS OF THE DELICATE FERNS AND SWEET FLOWERS, INSPIRED THEM TO SEE THE AREA CONVERTED INTO A GREAT PARK FOR THE PEOPLE. HERE WAS SANCTUARY IN THIS CATHEDRAL-LIKE FOREST. HERE WAS PEACE, SERENE AND PERFECT REST. HERE WAS A PLACE FOR PLAY AND PRAYER, WHERE THE BODY OF MAN MIGHT BE REFRESHED AND THE MIND UPLIFTED.

NOT FAR AWAY SAWMILLS WERE EATING THEIR DEVASTATING WAY INTO THE TREE RANKS. IT WOULD NOT BE LONG BEFORE THE RING OF AXES AND THE SWISH OF SAWS WOULD BE HEARD IN THE VERDANT HEART OF THE FOREST. THIS WOULD BE A TRAGEDY. IN THE OPINION OF THE EXPLORING PARTY, ALL THE GREAT REDWOODS WOULD FALL BEFORE THE WOODSMAN'S AXE AND NOT A TRACE OF THE GIANT TREE'S GRANDEUR WOULD REMAIN UNLESS SOME REPRESENTATIVE FOREST WERE SAVED. IT WAS WRONG THAT A FEW GREEDY MEN OF ONE GENERATION HAD THE RIGHT TO HARVEST FOR TEMPORARY PROFIT A GROWTH WHICH NATURE HAD TAKEN CENTURIES TO PRODUCE AND PERFECT. SOME PART OF THIS HERITAGE SHOULD BE PRESERVED FOR THE BENEFIT AND ENJOYMENT OF ALL GENERATIONS FOR ALL TIME.

FOR THE PURPOSE OF CHRYSTALIZING THIS SENTIMENT, IT WAS PROPOSED TO SET UP AN ORGANIZATION TO FIGHT THE CRUSADE TO SAVE THE REDWOODS. IN CONSEQUENCE OF THIS, THE SEMPERVIRENS CLUB WAS ORGANIZED AT SEMPERVIRENS CAMP ON THE EVENING OF MAY 18 1900. THE HAT WAS PASSED AND THIRTY-TWO DOLLARS WAS COLLECTED. THE MEMBERS OF THE CLUB FROM LEFT TO RIGHT WERE:

LOUISE C. JONES, CARRIE STEVENS WALTERS, J.F. COOPE, J.Q. PACKARD, TREASURER, ANDREW P. HILL, OFFICIAL ARTIST, ANDY BALDWIN, GUIDE, CHAS. WESLEY REED, PRESIDENT, W.W. RICHARDS, SPORTING SECRETARY, AND ROLY S KOOSER.

THE ZEAL AND THE ENTHUSIASM OF THIS SMALL GROUP KNEW NO BOUNDS. IN A FEW MONTHS, THE CLUB HAD ATTAINED A LARGE MEMBERSHIP. IT COMPELLED THE ATTENTION OF THE STATE AND IN LESS THAN A YEAR AFTER ITS ORGANIZATION, IT HAD SAVED THE FIRST OF THE REDWOOD PARKS FOR POSTERITY. INDEED, IT IS NOT TOO MUCH TO SAY THAT THE SERVICES RENDERED BY THESE PUBLIC SPIRITED PERSONS WHO GAVE SO MUCH OF THEIR TIME AND LABOR THAT THIS FOREST MIGHT BE SAVED FROM INEVITABLE DESTRUCTION, CAN NEVER BE TOO HIGHLY APPRECIATED.

ANDREW PUTNAM HILL

1853 - 1922

THE PASSAGE OF A BILL BY THE CALIFORNIA LEGISLATURE IN MARCH, 1901, APPROPRIATING A QUARTER OF A MILLION DOLLARS TO PURCHASE THE FIRST UNIT OF THE PARK WAS LARGELY EFFECTED THROUGH THE UNTIRING EFFORTS OF ANDREW PUTNAM HILL. AT THIS PERIOD THERE WAS LITTLE APPRECIATION FOR PARKS. LEGISLATORS WERE NOT PARK-MINDED. THE TIMBER CUTTING POPULATION WAS INCLINED TO REGARD HIS PROMOTION SCHEME WITH AS MUCH CONTEMPTUOUS PITY AS IF HE HAD PROPOSED TO FISHERMEN THAT THEY LOCK UP THE WATERS OF MONTEREY BAY.

IN FACT, IT IS DIFFICULT IN THIS DAY TO REALIZE THE TRUE NATURE OF THE OBSTACLES HE OVERCAME IN THIS SPLENDID PUBLIC SERVICE. HE HAD MADE THE FIRST PHOTOGRAPHIC RECORD OF THE PARK'S OUTSTANDING SCENIC ATTRACTIONS AND BROUGHT THESE TO THE ATTENTION OF ALL WHO WOULD LOOK AT THEM AS PICTORIAL EVIDENCE OF THE GREAT LOSS POSTERITY WOULD SUFFER SHOULD THESE SCENES BE WIPED OFF THE FACE OF THE EARTH. HOURS, DAYS, WEEKS, MONTHS WERE CONSUMED. INCESSANTLY, HE TALKED, BEGGED, PLEADED AND PURSUADED.

THIS TRIBUTE WAS PAID HIM BY ONE OF HIS FELLOW WORKERS IN THE CAUSE:

"THE DEAR, NOBLE FELLOW WITH HIS WONDERFUL ENTHUSIASM AND INCORRUPTIBLE HONESTY, AND OPEN, ABOVE-BOARD TALK, WAS AN ENIGMA TO MANY OLD POLITICAL LOBBYISTS WHO TRIED TO BLOCK HIS WORK. NOTHING DISHEARTENED HIM, NOTHING MADE HIM RETREAT UNTIL THE OBJECT OF HIS HEART WAS SECURED IN THE PASSAGE OF THAT BILL TO SAVE THE REDWOOD TREES."